PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
RRV1377

FM/AM DIGITAL SYNTHESIZER TUNER
F-C5RDS
FM/AM TUNER
F-C3

- **Refer to the service manual RRV1108 for F-C5RDS/HE and RRV1049 for F-C3/HE.**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	The voltage can be converted by the following method.
	F-C5RDS	F-C3		
HE8	O	O	AC220-230V	AC240V, *
HEWZI8	O	O	AC220-230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

$560\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ .... *RD1/8PM*$\boxed{5}\boxed{6}\boxed{1}$*J*
$47k\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ .... *RD1/4PS*$\boxed{4}\boxed{7}\boxed{3}$*J*
$0.5\Omega \rightarrow 0R5$ .... *RN2H*$\boxed{0}\boxed{R}\boxed{5}$*K*
$1\Omega \rightarrow 010$ .... *RS1P*$\boxed{0}\boxed{1}\boxed{0}$*K*

Ex.2 *When there are 3 effective digits (such as in high precision metal film resistors).*

$5.62k\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ .... *RN1/4PC*$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$*F*

1. CONTRAST OF F-C5RDS/HE8 AND F-C5RDS/HE

F-C5RDS/HE8 and F-C5RDS/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C5RDS/HE	F-C5RDS/HE8	
	Tuner assy	AWE7007	AWE7006 *	
	Tuner assy	AWZ7272	AWZ7271 *	
	Power assy	AWZ7275	AWZ7274 *	
	Rear panel	ANC7095	ANC7297	
⚠	Ferrite core	Not used	ATX7001 *	
	Screw	Not used	ABA1047 *	
NSP	Plate (GND)	Not used	ANK1120 *	
	FM antenna	ADH1005	ADH1002	

Note : Parts marked * are the same as those of F-C5RDS/HEWZI which is shown with F-C5RDS in the service manual RRV1108.

2. CONTRAST OF F-C5RDS/HEWZI8 AND F-C5RDS/HEWZI

Although F-C5RDS/HEWZI8 and F-C5RDS/HEWZI are different in model name, they consist of the same components.

P.S

F-C5RDS/HEWZI8 is made a design change like the following:

Mark	Description	OLD	NEW
	Ferrite core	ATX7001	Not used
⚠	Ferrite core	Not used	ATX7001

Power assy (AWZ7274) is made a design change like the following:

Mark	Description	OLD	NEW
⚠	C601	ACG1002 (0.01μF/400V)	ACG7020 (0.01μF/250V)

Tuner assy (AWZ7271) is made a design change like the following:

Mark	Description	OLD	NEW
	C559	CKDYB102K50	Not used
⚠	C559	Not used	CKDYB102K50

3. CONTRAST OF F-C3/HE8 AND F-C3/HE

F-C3/HE8 and F-C3/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HE8	
NSP	Tuner assy	AWE7002	AWE7019	
	Main assy	AWZ7048	AWZ8214 *	
	Rear panel	ANC7058	ANC7296	
	Screw	Not used	ABA1047	
	Spacer	AEC1236	Not used	
	FM antenna	ADH1005	ADH1002	

Note * :Refer to 2. PCB PARTS LIST and 3. SCHEMATIC AND PCB DIAGRAMS.

4. CONTRAST OF F-C3/HEWZI8 AND F-C3/HEWZI

F-C3/HEWZI8 and F-C3/HEWZI have the same construction except for the following:

Mark	Symbol & Description	F-C3/HEWZI	F-C3/HEWZI8
⚠	Fuse (FU2, T2A/250V)	Not used	AEK – 511 *

Note * :Refer to 3. SCHEMATIC AND PCB DIAGRAMS.

P.S

Main assy (AWZ7049) is made a design change like the following:

Mark	Description	OLD	NEW
⚠	C309	ACG1002 (0.01μF/400V)	ACG7020 (0.01μF/250V)
	L301	ATF 1135	Not used
⚠	L301	Not used	ATF1135
	C1	CKDYX103M25	Not used
⚠	C1	Not used	CKDYX103M25

2. PCB PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10^1 → 561 .... RD1/8PM$\boxed{5}\boxed{6}\boxed{1}$J
47kΩ → 47 × 10^3 → 473 .... RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5Ω → 0R5 .... RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1Ω → 010 .... RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10^1 → 5621 .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

MAIN ASSY (AWZ8214)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC103		AN7470P
	IC102		LA1265S
	IC101		LM7001J
	IC301		NJM7812AS
	Q301		2SA1529
	Q103, Q112 – Q115, Q117 – Q119		2SC1740S
	Q305, Q401		2SC1740S
	Q111		2SC1740SLN
	Q101, Q102		2SC2668
	Q304		2SD438
	Q110		2SK246
	Q104, Q106, Q108		XDA124ES
	Q116, Q302		XDA143ES
	Q105, Q107, Q109, Q122, Q303		XDC143ES
	Q306		XDC143ES
	D102 – D108, D113, D114, D306		1SS252
	D401, D402		1SS252
	D101		1SV156
	D112, D305, D403		RD6.2ESB
	D301 – D304		S5566

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L102		ATE – 079
	F103		ATF – 107
	F101, F102		ATF – 119
	F104		ATF – 208
	F105		ATF1088
⚠	L301	(180μH, AC250V)	ATF1135
	L101		LAU2R2J
	L103, L104, L106		LAU2R2K
	L107		LAU330J

TRANSFORMERS

Mark	No.	Description	Parts No.
⚠	T301	(6.5VA)	ATT1226

CAPACITORS

Mark	No.	Description	Parts No.
	C303	(0.047μF, 25V)	ACG – 009
⚠	C309	(10000PF, AC250V)	ACG7020
	C304		ACH1246
	C109, C117, C118		CCDCH150J50
	C187		CCPUSL270J50
	C115		CCPUSL470J50
	C138		CEANP4R7M50
	C133		CEAS010M50
	C127		CEAS100M50
	C128, C137, C301		CEAS101M16
	C143		CEAS1R5M50
	C189		CEAS220M25
	C302		CEAS222M35
	C126, C151, C152		CEAS2R2M50
	C111		CEAS330M16
	C142		CEAS3R3M50
	C135, C150, C305, C306		CEAS470M10
	C123, C140		CEAS4R7M50
	C144		CEASR22M50
	C308		CEHAQ330M16
	C112		CFTXA224J50
	C105, C107		CKDYB103K50
	C139		CKDYB122K50
	C124		CKDYB222K50
	C155, C156		CKDYB332K50
	C132		CKDYF103Z50
	C122, C130, C131, C4		CKDYF223Z50
⚠	C1		CKDYX103M25
	C110, C125, C146		CKDYX473M25
	C185, C307, C402		CKPUYB101K50
	C101, C102, C186		CKPUYB102K50
	C147		CKPUYB121K50
	C134		CKPUYB331K50
	C184		CKPUYF223Z25
	C108		CKPUYF473Z16
	C103, C104, C106, C113, C114		CKPUYY103M16
	C116, C129, C136, C145		CKPUYY103M16
	C148, C149		CQMA102J50
	C141		CQPA471J100

RESISTORS

Mark	No.	Description	Parts No.
	R117		RD1/2PM681J
	VR101	(4.7kΩ)	ACP1042
	VR102	(10kΩ)	ACP1043
	VR103	(22kΩ)	ACP1044
		Other Resistors	RD1/8PM☐☐☐J

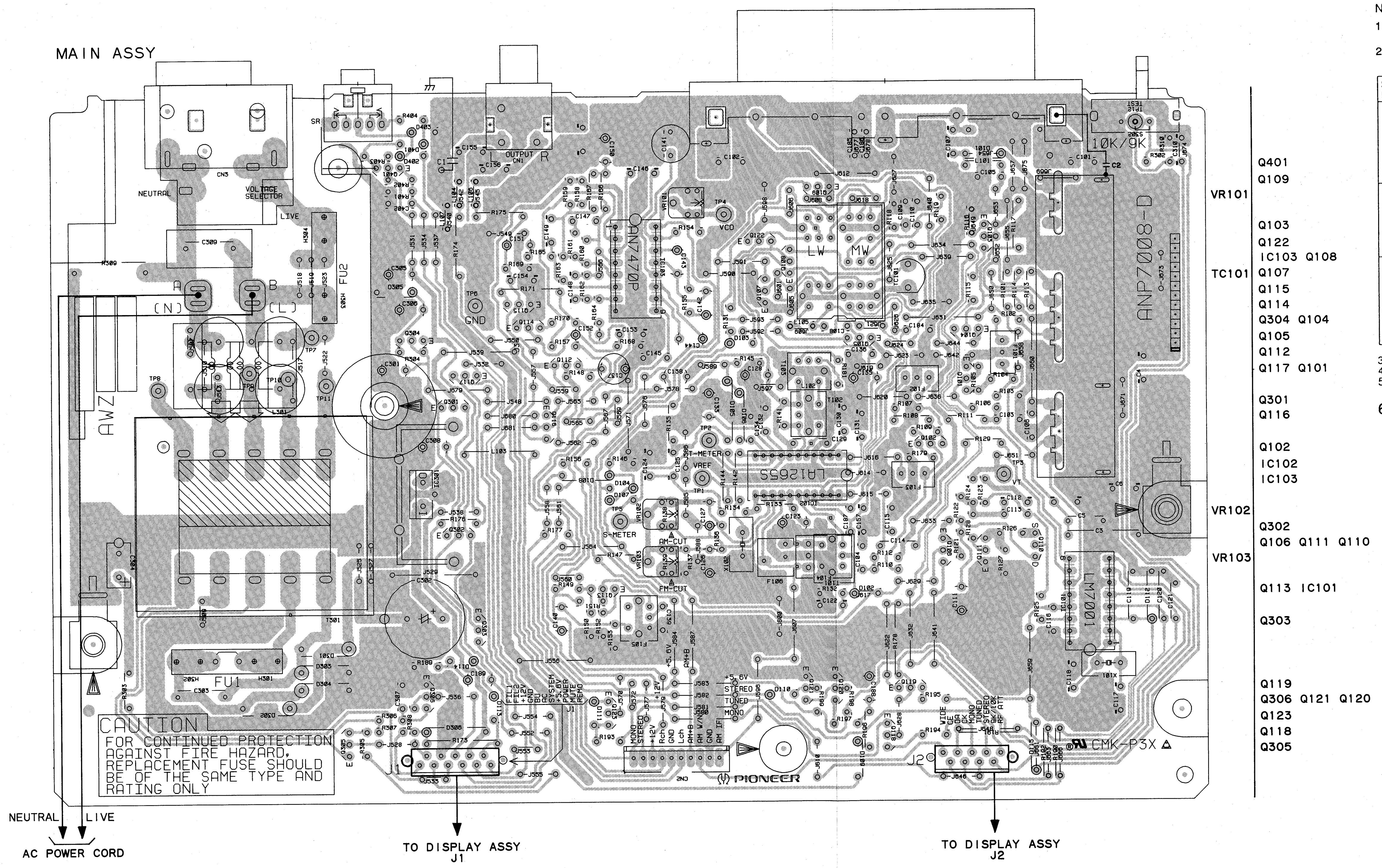
OTHERS

Mark	No.	Description	Parts No.
		SCREW	ABA1012
		ANTENNA TERMINAL 2 – P	AKA1012
	CN1	PIN JACK(2P)	AKB1146
	CN8220	JACK	AKN – 209
⚠	CN3	AC SOCKET 1 – P	AKP1034
	H301 – H304	FUSE CLIP	AKR1003
		CABLE HOLDER	AKT1007
		CABLE HOLDER	AKT1023
		HEAT SINK M	ANH – 697
	X101	CRYSTAL RESONATOR	ASS1042
	X102	CERAMIC RESONATOR	ATF1027
		AM RF TUNING BLOCK	AXX1026
		4 SERIAL F.E. MODULE ASSY	AXQ1004

Note: 4 serial F.E. module assy has no servise part.

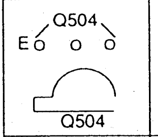
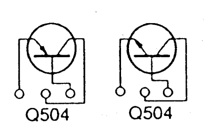
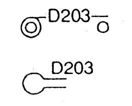
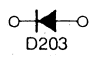
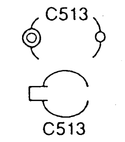
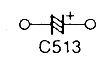
3. SCHEMATIC AND PCB DIAGRAMS

- This diagram is viewed from the mounted parts side.


MAIN ASSY
NEUTRAL
VOLTAGE SELECTOR
LIVE
FU2
FU1
AWZ
OUTPUT R
GND
VCD
LW
MW
AN7470P
ANP7008-D
LA1265S
LM7001
S-METER
RT-METER
VREF
AM-CUT
FM-CUT
STEREO
TUNED
MONO
10K/9K
CMK-P3X
PIONEER
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
Q401
Q109
VR101
Q103
Q122
IC103 Q108
TC101
Q107
Q115
Q114
Q304 Q104
Q105
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC103
VR102
Q302
Q106 Q111 Q110
VR103
Q113 IC101
Q303
Q119
Q306 Q121 Q120
Q123
Q118
Q305
NEUTRAL
LIVE
AC POWER CORD
TO DISPLAY ASSY J1
TO DISPLAY ASSY J2

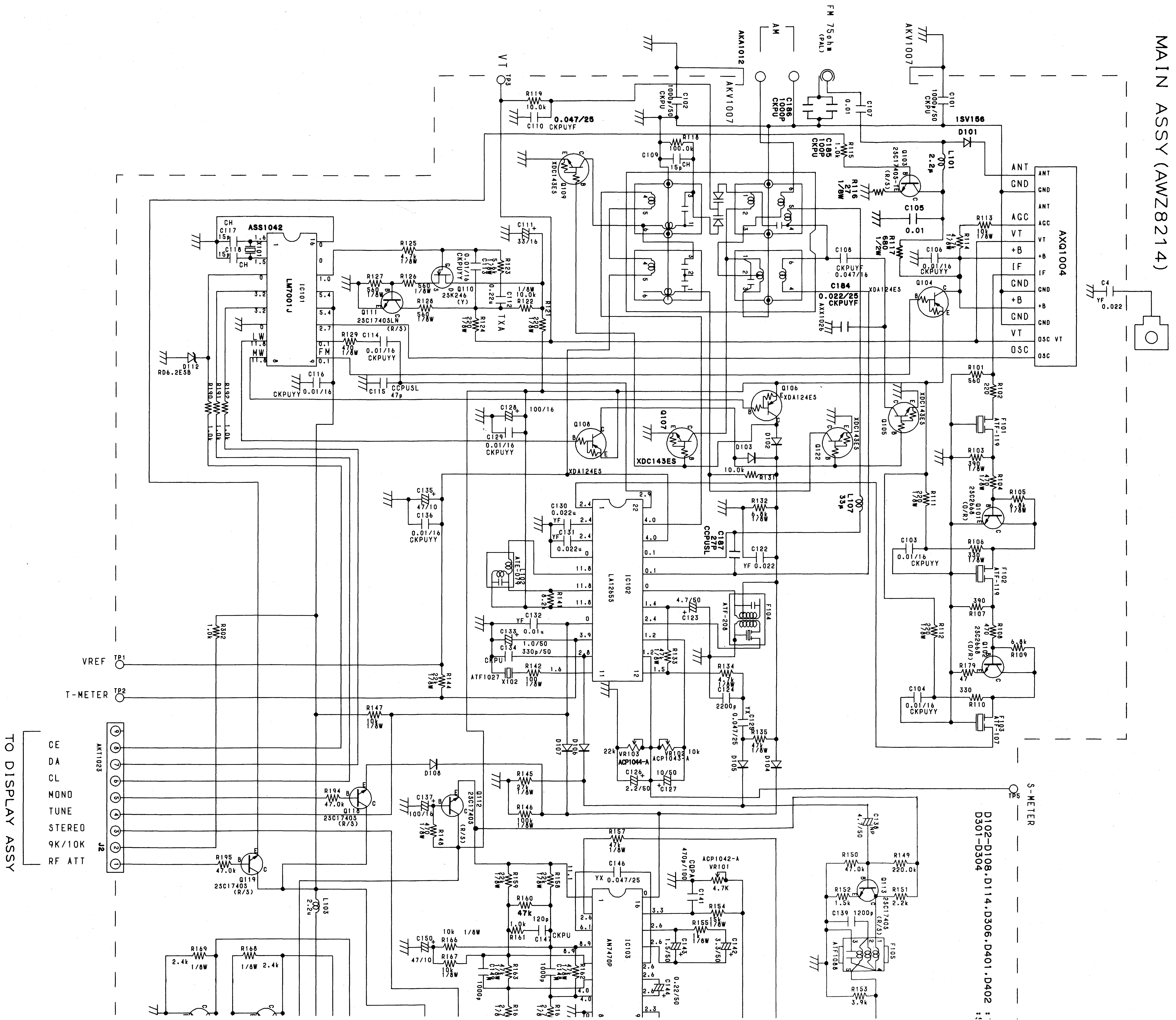
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.
6. The parts mounted on each PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

MAIN ASSY (AWZ8214)

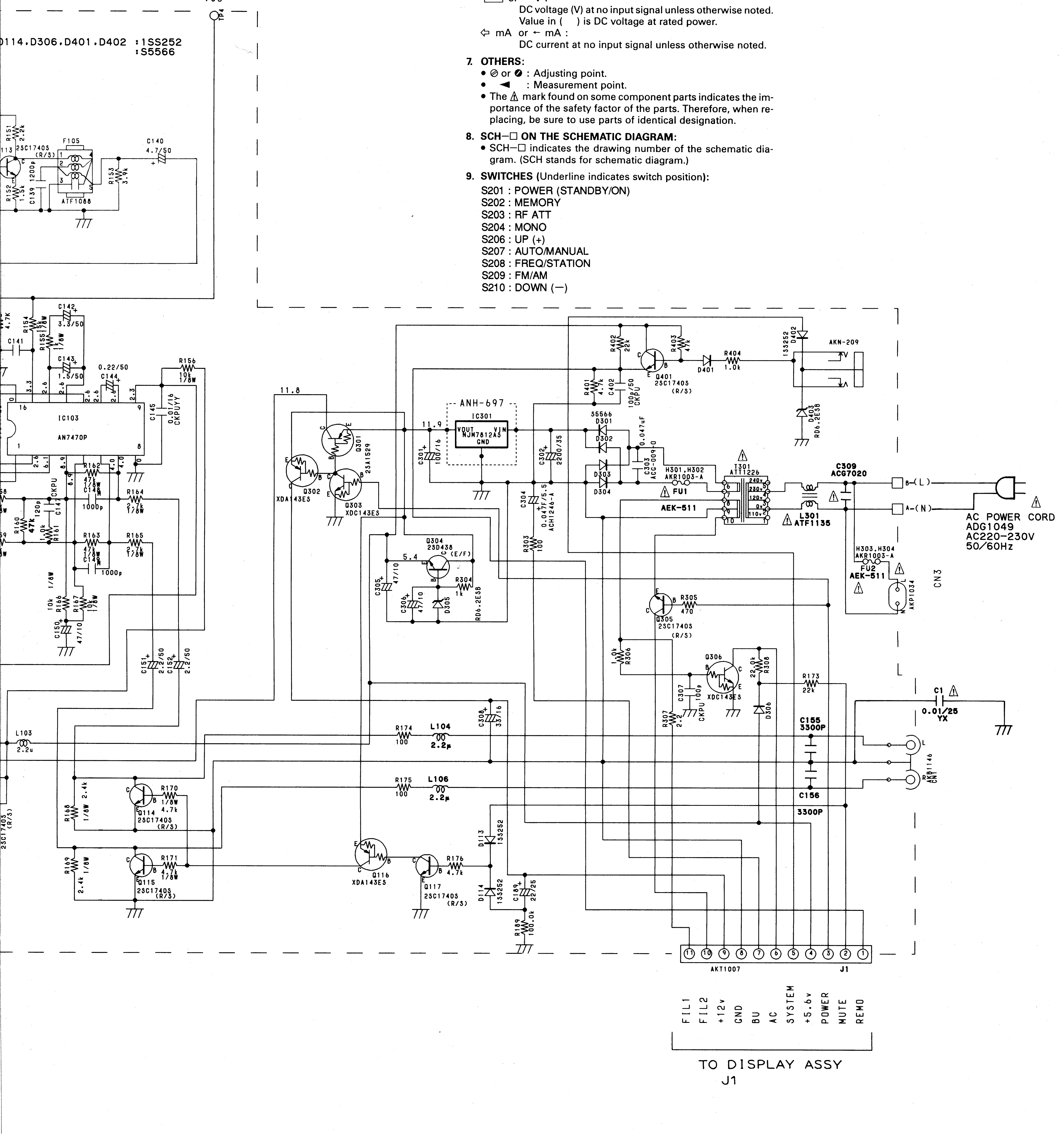


1
2
3
4
5
AM
FM 75ohm (PAL)
AKA1012
AKV1007
VT
TP3
R119 10.0k
C110 CKPUYF 0.047/25
C102 1000p/50 CKPU
C186 1000P CKPU
C107 0.01
C101 1000p/50 CKPU
1SV156
D101
L101 2.2μ
Q103 2SC1740S-TE (R/S)
R116 27 1/8W
R118 100.0k
C109 15p CH
R115 1.0k
C185 100P CKPU
C105 0.01
R117 560 1/2W
C106 0.01/16 CKPUYY
C108 CKPUYF 0.047/16
C184 0.022/25 CKPUYF
AXX1026
Q109 XDC143ES
ANT
GND
AGC
VT
+B
IF
OSC
AXQ1004
C4 YF 0.022
ASS1042
LM7001J
IC101
C117 15p CH
C118 15p CH
X101
LW
MW
FM
D112 RD6.2ESB
R125 4.7k 1/8W
R127 560 1/8W
R126 560 1/8W
R128 560 1/8W
Q111 2SC1740SLN (R/S)
Q110 2SK246 (Y)
C113 0.01/16 CKPUYY
R123 5.6k
C112 0.22u
R122 10.0k 1/8W
R124 220 1/8W
R121 220 1/8W
TXA
C111 33/16
R129 470 1/8W
C114 0.01/16 CKPUYY
C116 CKPUYY 0.01/16
C115 CCPUSL 47p
R190 1.0k
R191 1.0k
R192 1.0k
C128 100/16
C129 0.01/16 CKPUYY
Q108 XDA124ES
Q107 XDC143ES
Q106 XDA124ES
Q105 XDC143ES
Q122 XDC143ES
D103
D102
R131 10.0k
R101 560
R102 220
F101 ATF-119
R103 390 1/8W
R104 470 1/8W
R105 6.8k 1/8W
Q101 2SC2668 (O/R)
R111 220 1/8W
C103 0.01/16 CKPUYY
R106 330 1/8W
F102 ATF-119
R107 390
R108 470
R109 6.8k
Q102 2SC2668 (O/R)
R112 220 1/8W
R179 47
C104 0.01/16 CKPUYY
R110 330
F103 ATF-107
C135 47/10
C136 0.01/16 CKPUYY
C130 0.022u YF
C131 YF 0.022u
ATE-078
R141 8.2k
IC102 LA1265S
R132 6.8k 1/8W
L107 33μ
C187 27P CCPUSL
C122 YF 0.022
C123 4.7/50
F104 ATF-208
C132 YF 0.01u
C133 1.0/50
C134 330p/50
CKPU
ATF1027
X102
R142 100 1/8W
R133 47k 1/8W
R134 4.7k 1/8W
C124 2200p
C125 YX 0.047/25
R135 47k 1/8W
VR103 ACP1044-A 22k
VR102 ACP1043-A 10k
C126 2.2/50
C127 10/50
D107
D106
D105
D104
VREF
TP1
T-METER
TP2
R302 1.0k
R144 22k 1/8W
R147 10k 1/8W
AKT1023
TO DISPLAY ASSY J2
CE
DA
CL
MONO
TUNE
STEREO
9K/10K
RF ATT
J2
R194 47.0k
Q118 2SC1740S (R/S)
D108
C137 100/16
Q112 2SC1740S (R/S)
R148 1/8W
R145 27k 1/8W
R146 100k 1/8W
R195 47.0k
Q119 2SC1740S (R/S)
L103 2.2u
S-METER
TP5
C138 NP 4.7/50
R150 47.0k
R149 220.0k
R152 1.5k
Q113 2SC1740S (R/S)
R151 2.2k
C139 1200p
F105 ATF1088
R153 3.9k
R157 47k 1/8W
C146 YX 0.047/25
C140 CQPA 470p/100
ACP1042-A VR101 4.7K
C141
R154 15k 1/8W
R155 15k 1/8W
C143 1.5/50
C142 3.3/50
C144 0.22/50
IC103 AN7470P
R159 22k 1/8W
R158 22k 1/8W
R160 47k
R161 1.0k
C147 120p CKPU
C150 47/10
R166 10k 1/8W
R167 10k 1/8W
R163 4.7k
R162 4.7k
1000p
R169 2.4k 1/8W
R168 1/8W 2.4k
D102-D108,D114,D306,D401,D402 :
D301-D304

NOTE FOR SCHEMATIC DIAGRAMS (Type 3A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   mV : Signal voltage at FM 1kHz, 100% MOD.
   ☐ or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⊘ : Adjusting point.
   - ◄ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH–☐ ON THE SCHEMATIC DIAGRAM:**
   - SCH–☐ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

S201 : POWER (STANDBY/ON)
S202 : MEMORY
S203 : RF ATT
S204 : MONO
S206 : UP (+)
S207 : AUTO/MANUAL
S208 : FREQ/STATION
S209 : FM/AM
S210 : DOWN (–)



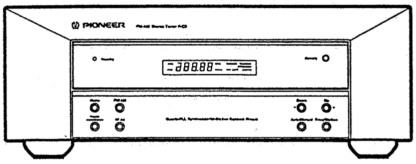
5
6
7
8
9
D114.D306.D401.D402 :1SS252
:S5566
VCO
TP4
IC103
AN7470P
IC301
NJM7812AS
ANH-697
11.8
11.9
5.4
Q301 2SA1529
Q302 XDA143ES
Q303 XDC143ES
Q304 2SD438
Q305 2SC1740S (R/S)
Q306 XDC143ES
Q401 2SC1740S (R/S)
Q114 2SC1740S (R/S)
Q115 2SC1740S (R/S)
Q116 XDA143ES
Q117 2SC1740S (R/S)
T301 ATT1226
L301 ATF1135
C309 ACG7020
H301, H302 AKR1003-A
FU1 AEK-511
H303, H304 AKR1003-A
FU2 AEK-511
AKP1034
AKN-209
AKB1146 CN1
CN3
C1 0.01/25 YX
C155 3300P
C156 3300P
B–(L)
A–(N)
AC POWER CORD
ADG1049
AC220-230V
50/60Hz
AKT1007
J1
FIL1
FIL2
+12v
GND
BU
AC
SYSTEM
+5.6v
POWER
MUTE
REMO
TO DISPLAY ASSY
J1

XR2375

4154

PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
RRV1049

FM/AM TUNER
F-C3

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	F−C3		
KU	○	AC120V	—
HE	○	AC220−230V	AC240V, ✱
HB	○	AC240V	AC220−230V, ✱
HEWZI	○	AC220−230V	AC240V, ✱

✱ : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the “Line Voltage Selection” described in Service Manual.

- **For HEWZI and HB types, refer to page 25.**

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

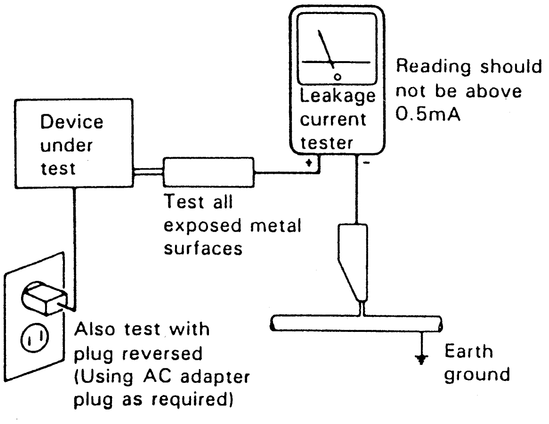
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Leakage current tester
Reading should not be above 0.5mA
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

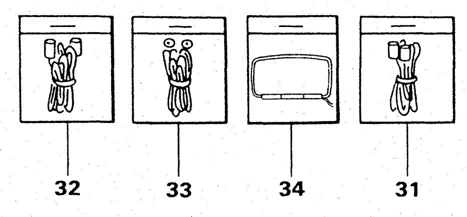
2. EXPLODED VIEWS, PACKING AND PARTS LIST

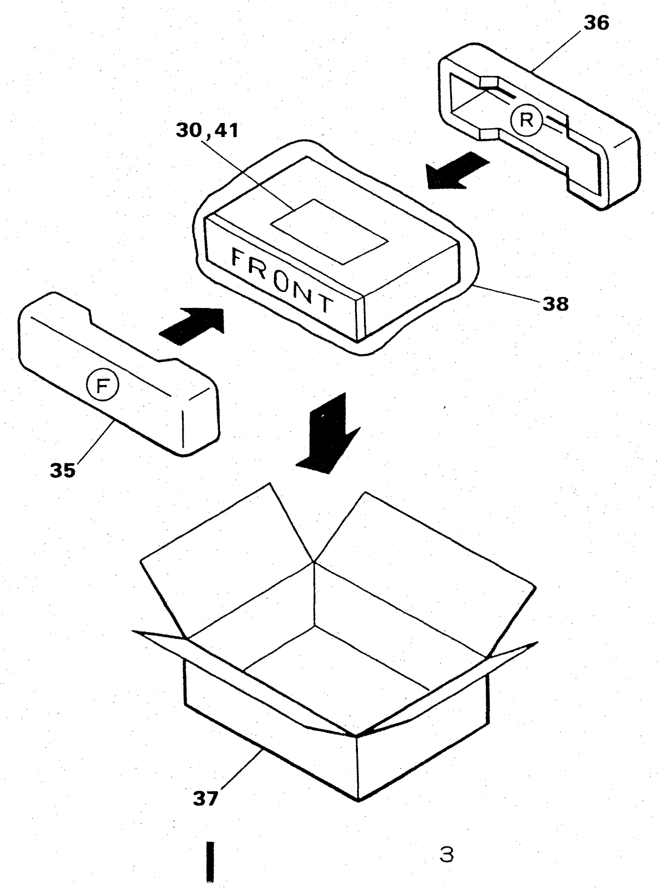
NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by " ◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

• Parts List (FOR F–C3/KU and HE)

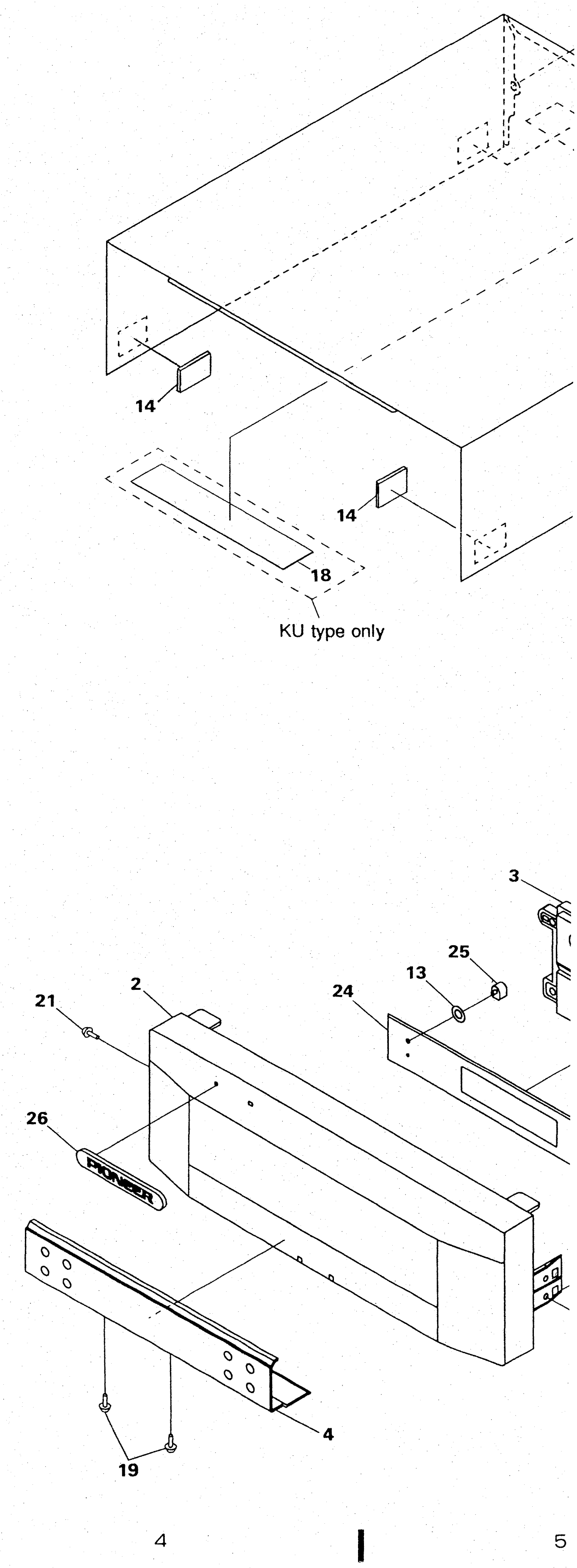
Mark	No.	Description	Parts No.
	1	3–SERIAL F.E.MODULE ASSEMBLY	AXQ1003
	2	FRONT PANEL (For KU type)	AMB7079
	2	FRONT PANEL (For HE type)	AMB7027
	3	SUB PANEL (For KU type)	AMB7073
	3	SUB PANEL (For HE type)	AMB7029
	4	FRONT PANEL (AL)	ANB7001
⚠	5	FU1 (500mA/125V) (For KU type)	AEK–136
⚠	5	FU1 (T400mA/250V) (For HE type)	AEK–504
⚠	6	FU2 (T2A/250V) (HE type only)	AEK–511
⚠	7	AC POWER CORD (For KU type)	ADG1058
⚠	7	AC POWER CORD (For HE type)	ADG1049
NSP	8	SPACER (HE type only)	AEC1236
NSP	9	PCB POST (HE type only)	DEC1390
NSP	10	CHASSIS	ANA7006
	11	REAR PANEL (For KU type)	ANC7060
	11	REAR PANEL (For HE type)	ANC7058
	12	INSULATOR	PNW2363
	13	WASHER	ABE7001
	14	CUSHION RUBBER	AEB7004
	15	BINDER	AEC–826
⚠	16	CORD STOPPER (For KU type)	AEP–113
⚠	16	CORD STOPPER (For HE type)	AEC–882
NSP	17	PCB MOULD	AMR1525
	18	65 LABEL (KU type only)	ORW1069
	19	SCREW (STEEL)	ABA1006
	20	SCREW	ABA1018
	21	SCREW	BBZ30P080FZK
	22	SCREW	BBZ30P100FZK
	23	SCREW	BPZ26P080FMC
	24	DISPLAY PANEL	AAK7059
	25	LED LENS	PNW2019
	26	NAME PLATE (AL)	RAN1013
	27	BUTTON	AAD7015
	28	BUTTON	RAC1859
	29	BONNET	ANE7010
	30	OPERATING INSTRUCTIONS (English) (For KU type)	ARB7005
	30	OPERATING INSTRUCTIONS (English/German/French/Italian/ Swedish/Spanish/Dutch/ Portuguese) (For HE type)	ARE7010
	31	PLUG CORD	ADE–052
	32	CORD WITH PLUG	ADE–085
	33	FM ANTENNA	ADH1005
	34	LOOP ANTENNA	ATB1006
	35	F.PAD	AHA7010
	36	R.PAD	AHA7011
	37	PACKING CASE (For KU type)	AHD7015
	37	PACKING CASE (For HE type)	AHD7014
	38	PACKING SHEET	AHG1093
	39	MAIN ASSEMBLY (For KU type)	AWZ7050
	39	MAIN ASSEMBLY (For HE type)	AWZ7048
	40	DISPLAY ASSEMBLY (For KU type)	AWZ7043
	40	DISPLAY ASSEMBLY (For HE type)	AWZ7041
	41	SUB OPERATING INSTRUCTIONS (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese) (For HE type)	ARH7003

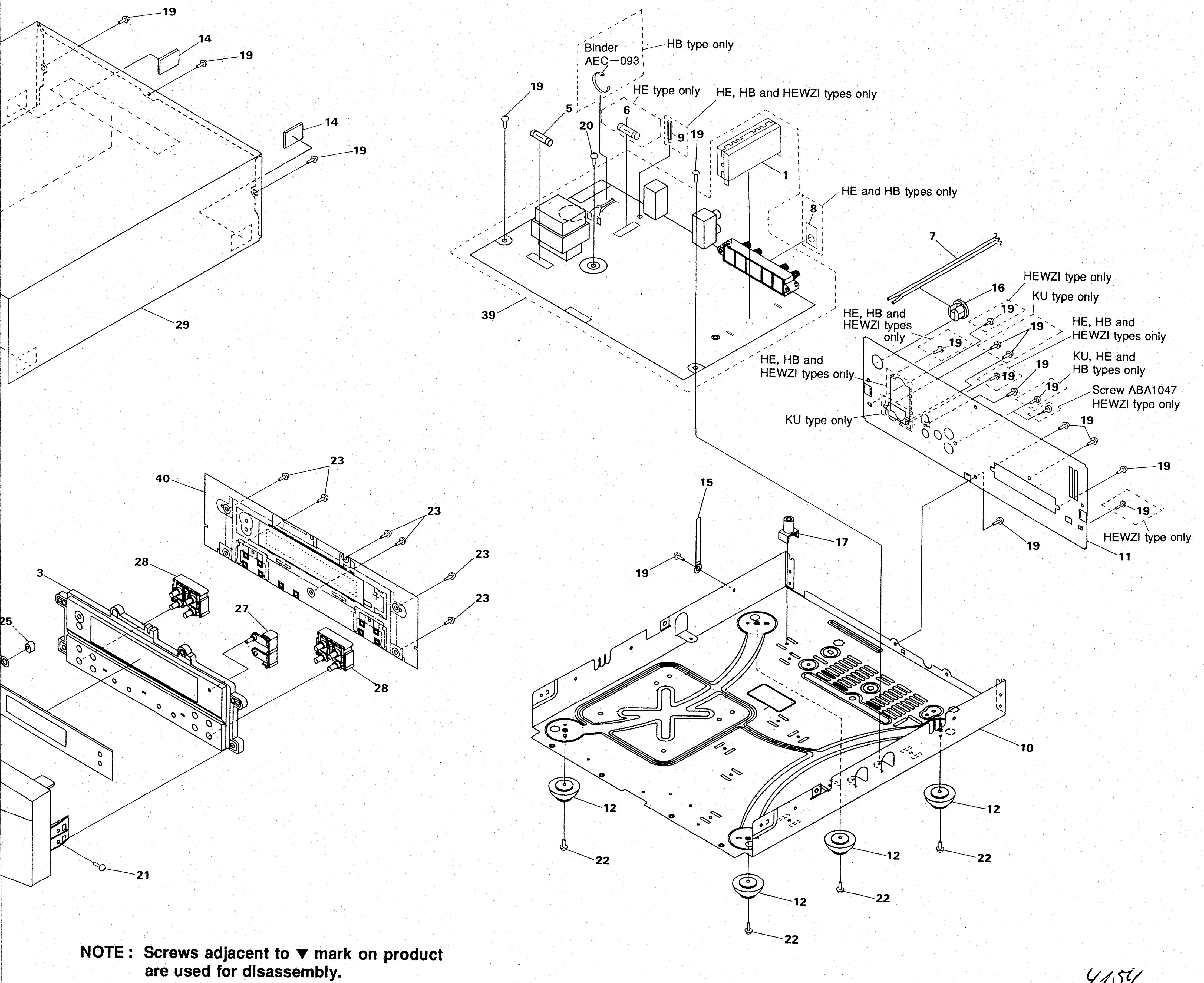
• Packing





• Exploded View




19
14
19
14
19
29
Binder
AEC−093
HB type only
HE type only
HE, HB and HEWZI types only
19
5
20
6
9
19
1
HE and HB types only
8
39
7
HEWZI type only
16
KU type only
19
HE, HB and
HEWZI types
only
19
19
HE, HB and
HEWZI types only
HE, HB and
HEWZI types only
KU, HE and
HB types only
19
19
Screw ABA1047
HEWZI type only
KU type only
19
19
19
HEWZI type only
19
11
40
23
23
23
23
15
17
19
28
3
27
25
28
10
12
12
12
12
22
22
22
22
21

NOTE : Screws adjacent to ▼ mark on product are used for disassembly.

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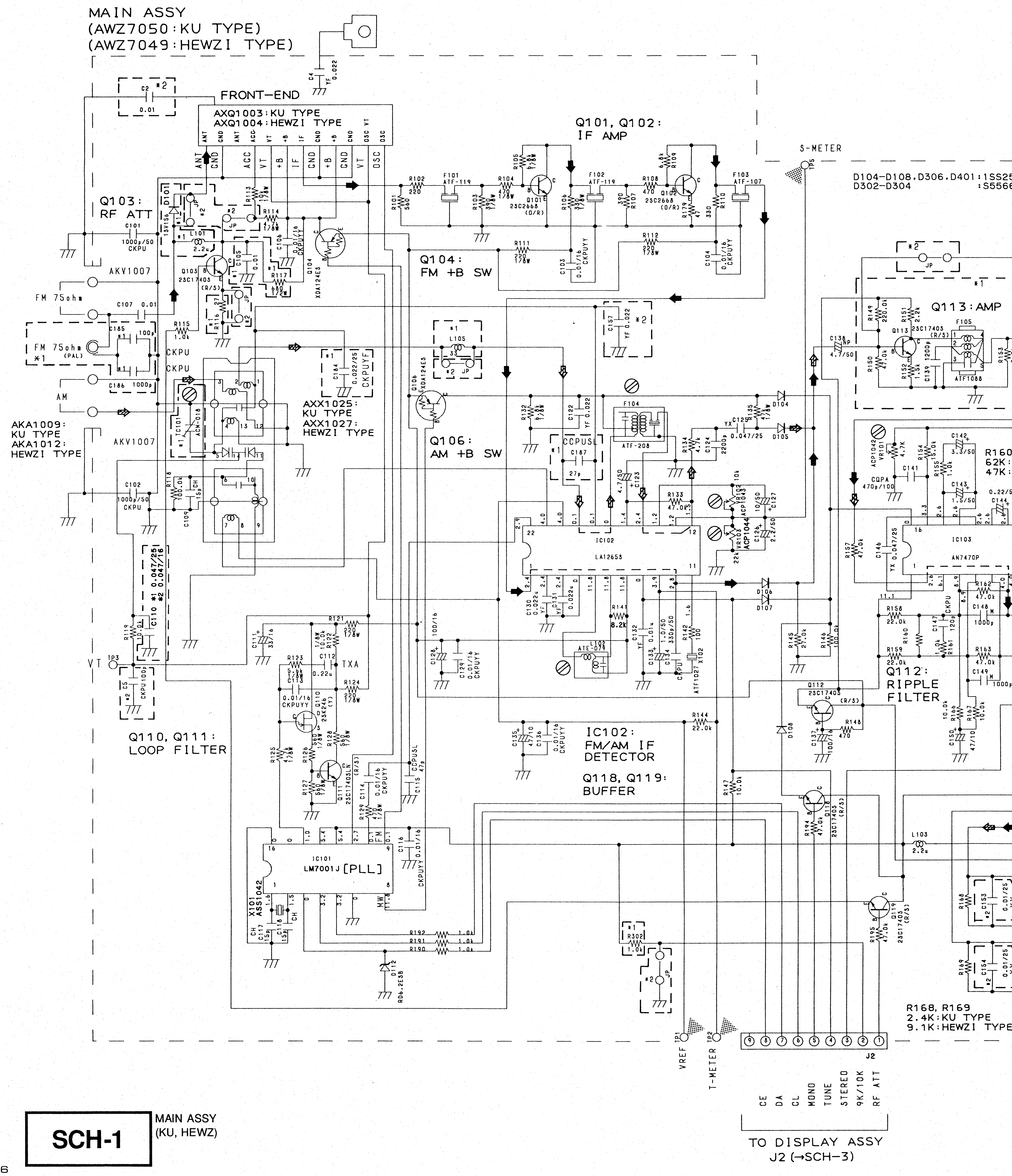
3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

3.1 MAIN ASSY (For KU and HEWZI types)


MAIN ASSY
(AWZ7050:KU TYPE)
(AWZ7049:HEWZI TYPE)
FRONT-END
AXQ1003:KU TYPE
AXQ1004:HEWZI TYPE
ANT
GND
ACC
VT
+B
IF
OSC
Q103:
RF ATT
AKV1007
FM 75ohm
FM 75ohm *1 (PAL)
AM
AKA1009:
KU TYPE
AKA1012:
HEWZI TYPE
AXX1025:
KU TYPE
AXX1027:
HEWZI TYPE
Q101, Q102:
IF AMP
Q104:
FM +B SW
Q106:
AM +B SW
S-METER
D104–D108, D306, D401:1SS25
D302–D304 :S5566
Q113:AMP
IC102
LA1265S
IC102:
FM/AM IF
DETECTOR
Q118, Q119:
BUFFER
Q110, Q111:
LOOP FILTER
IC101
LM7001J [PLL]
X101
ASS1042
IC103
AN7470P
Q112:
RIPPLE
FILTER
R160
62K:
47K:
C110 *1 0.047/25
*2 0.047/16
VT
VREF
T-METER
J2
CE
DA
CL
MONO
TUNE
STEREO
9K/10K
RF ATT
R168, R169
2.4K:KU TYPE
9.1K:HEWZI TYPE

TO DISPLAY ASSY
J2 (→SCH-3)

SCH-1 MAIN ASSY
(KU, HEWZ)

NOTE FOR SCHEMATIC DIAGRAMS (Type 3A)

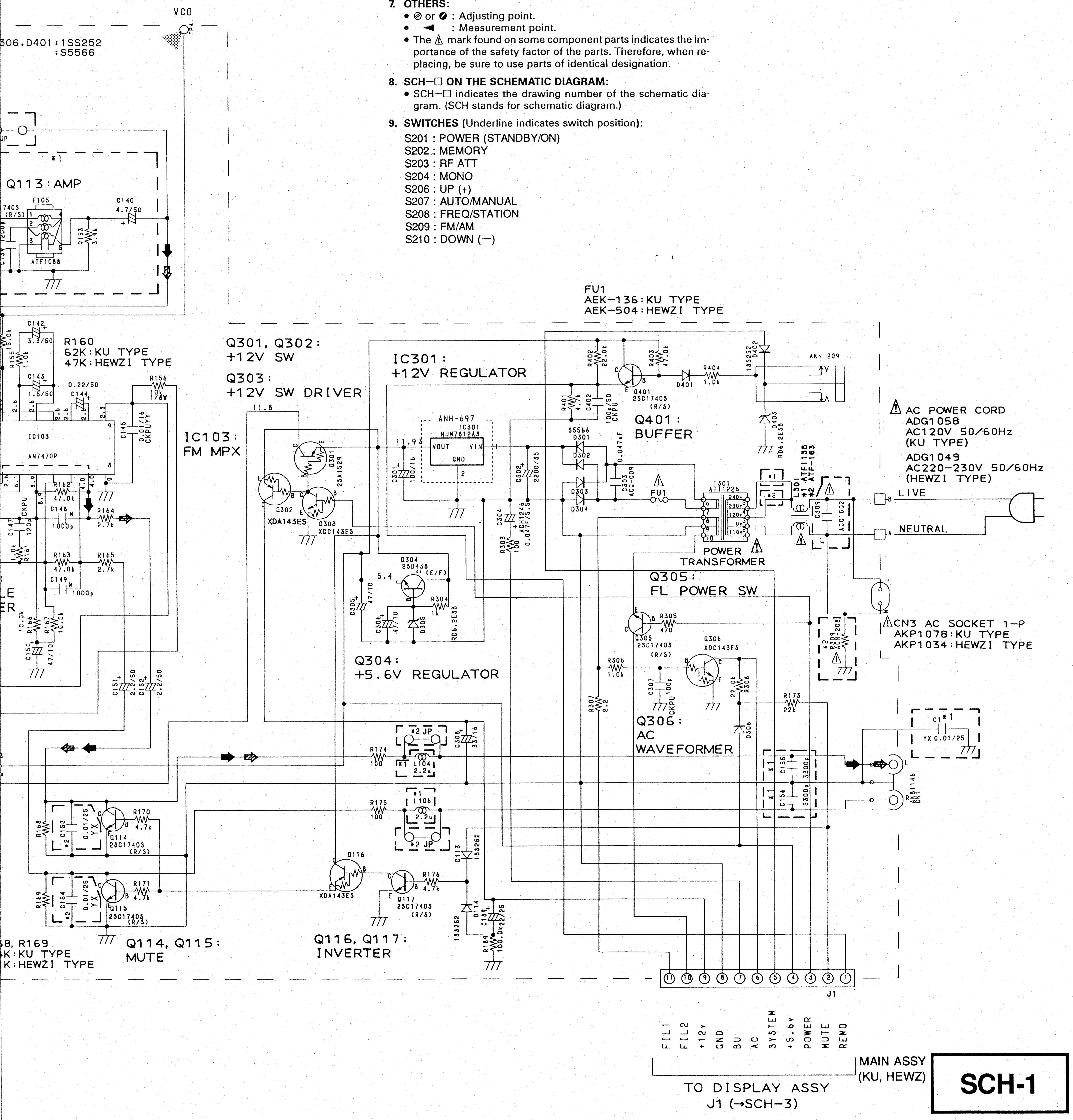
1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   mV : Signal voltage at FM 1kHz, 100% MOD.
   or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⊘ : Adjusting point.
   - ◄ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH–☐ ON THE SCHEMATIC DIAGRAM:**
   - SCH–☐ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

S201 : POWER (STANDBY/ON)
S202 : MEMORY
S203 : RF ATT
S204 : MONO
S206 : UP (+)
S207 : AUTO/MANUAL
S208 : FREQ/STATION
S209 : FM/AM
S210 : DOWN (−)

SCH–1

➡ : FM Signal route
⇨ : AM Signal route

[*1] : HEWZI TYPE ONLY
[*2] : KU TYPE ONLY


VCO
TP4
306, D401 : 1SS252
: S5566
Q113 : AMP
*1
F105
ATF1088
R153 3.9k
C140 4.7/50
C142 3.3/50
R155 1.0k
R160
62K : KU TYPE
47K : HEWZI TYPE
C143 1.5/50
C144 0.22/50
R156 10Ω 1/8W
C145 0.01/16 CKPUYY
IC103
AN7470P
IC103 :
FM MPX
R162 47.0k
C148 1000p
R164 2.7k
C147 120p CKPU
R161 1.0k
R163 47.0k
R165 2.7k
C149 1000p
R166 10.0k
R167 10.0k
C150 47/10
C151 2.2/50
C152 2.2/50
Q301, Q302 :
+12V SW
Q303 :
+12V SW DRIVER
11.8
Q301 2SA1529
Q302 XDA143ES
Q303 XDC143ES
IC301 :
+12V REGULATOR
ANH-697
IC301
NJM7812AS
VOUT
VIN
GND
11.93
C301 100/16
C302 2200/35
C304 0.047F/5.5 CH1246
R303 100
Q304 2SD438 (E/F)
5.4
C305 47/10
C306 47/10
D305 RD6.2ESB
R304 1k
Q304 :
+5.6V REGULATOR
FU1
AEK-136 : KU TYPE
AEK-504 : HEWZI TYPE
R401 4.7k
C402 100p/50 CKPU
R402 22.0k
R403 47.0k
Q401 2SC1740S (R/S)
Q401 :
BUFFER
D401
R404 1.0k
1SS252 D402
AKN 209
D403 RD6.2ESB
S5566 D301
D302
D303
D304
0.047μF
C303 ACC-009
FU1
T301 ATT1226
240V
230V
120V
110V
POWER TRANSFORMER
L301
*1 ATF1135
*2 ATF-163
C309
ACC1002
AC POWER CORD
ADG1058
AC120V 50/60Hz
(KU TYPE)
ADG1049
AC220–230V 50/60Hz
(HEWZI TYPE)
LIVE
NEUTRAL
Q305 :
FL POWER SW
R305 470
Q305 2SC1740S (R/S)
Q306 XDC143ES
R306 1.0k
C307 100p CKPU
R307 2.2
R308 22.0k
D306
Q306 :
AC WAVEFORMER
R173 22k
CN3 AC SOCKET 1-P
AKP1078 : KU TYPE
AKP1034 : HEWZI TYPE
*2 R309 ACN-208
C1 *1 YX 0.01/25
C155 3300p
C156 3300p
AKB1146 CN1
L
R
*2 JP
C308 33/16
R174 100
L104 2.2μ
L106 2.2μ
R175 100
*1
R168
C153 0.01/25 YX
Q114 2SC1740S (R/S)
R170 4.7k
R169
C154 0.01/25 YX
Q115 2SC1740S (R/S)
R171 4.7k
D116 XDA143ES
Q117 2SC1740S (R/S)
R176 4.7k
D113 1SS252
D114 1SS252
C189 22/25
R169 100.0k
68, R169
K : KU TYPE
K : HEWZI TYPE
Q114, Q115 :
MUTE
Q116, Q117 :
INVERTER
J1
FIL1
FIL2
+12V
GND
BU
AC
SYSTEM
+5.6V
POWER
MUTE
REMO
5
6
7
8
9
A
B
C
D
E
F

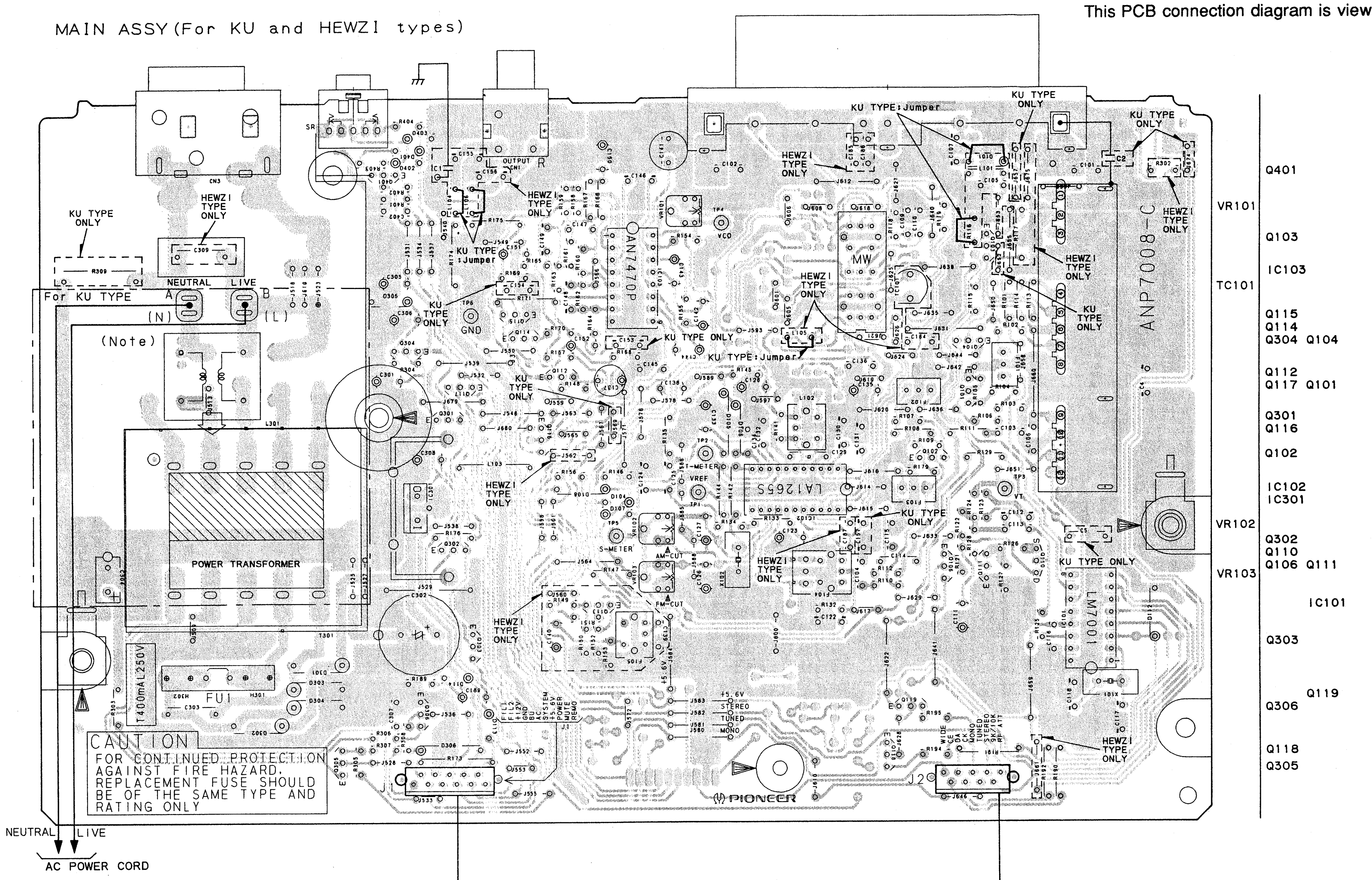
TO DISPLAY ASSY
J1 (→SCH–3)

MAIN ASSY
(KU, HEWZ)

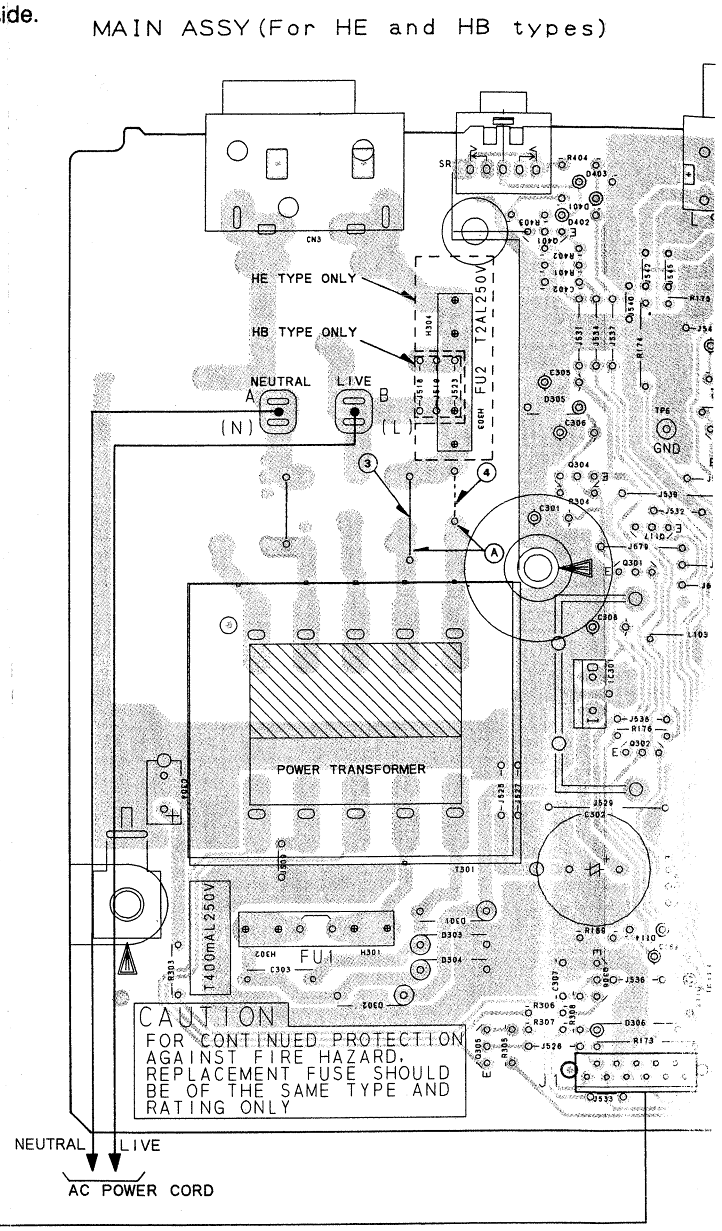
SCH-1

This PCB connection diagram is viewed from the parts mounted side.

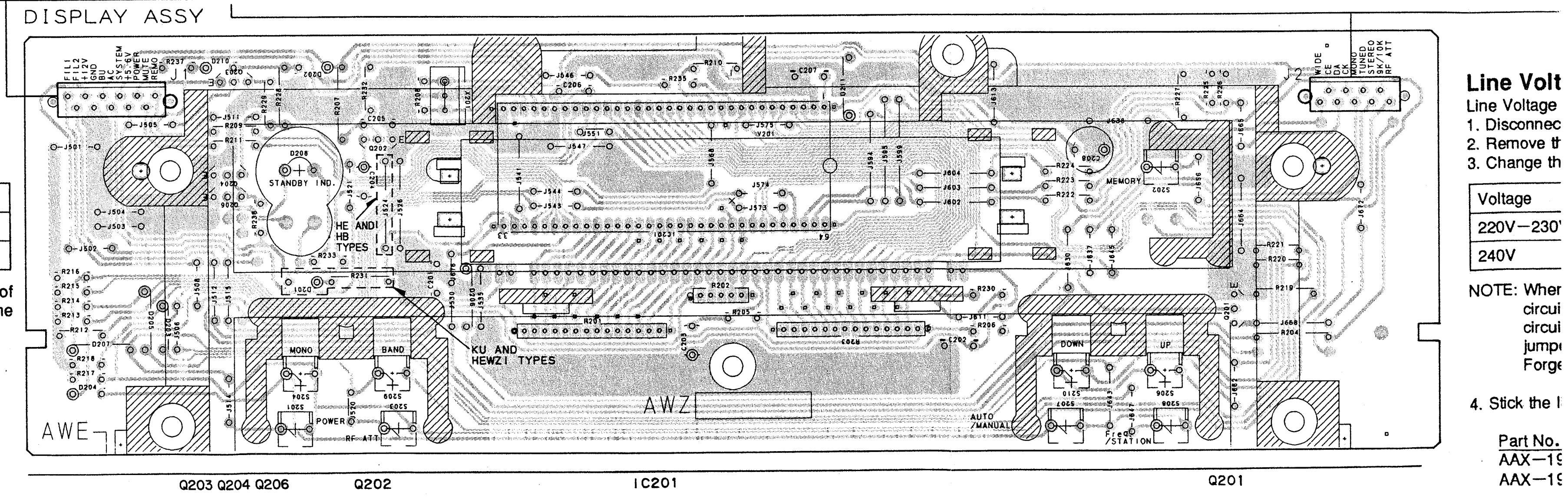
MAIN ASSY (For KU and HEWZI types)


KU TYPE ONLY
HEWZI TYPE ONLY
For KU TYPE
NEUTRAL
LIVE
(N)
(L)
(Note)
POWER TRANSFORMER
T400mAL250V
FU1
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
OUTPUT
KU TYPE:Jumper
AN7470P
LA1265S
LM7001
ANP7008-C
MW
GND
VCO
S-METER
AM-CUT
FM-CUT
T-METER
VREF
STEREO
TUNED
MONO
PIONEER
J1
J2
Q401
VR101
Q103
IC103
TC101
Q115
Q114
Q304 Q104
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC301
VR102
Q302
Q110
VR103
Q106 Q111
IC101
Q303
Q119
Q306
Q118
Q305
NEUTRAL
LIVE
AC POWER CORD

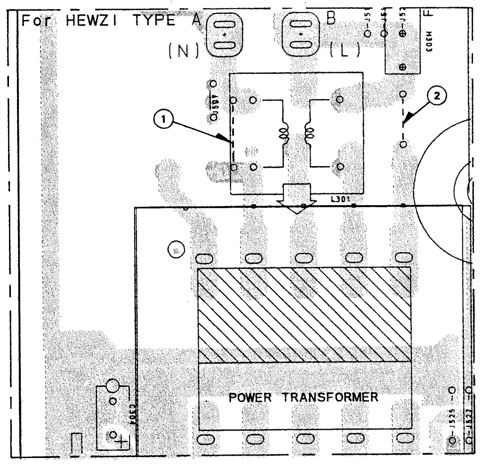
MAIN ASSY (For HE and HB types)


HE TYPE ONLY
HB TYPE ONLY
NEUTRAL
LIVE
(N)
(L)
T2AL250V
FU2
GND
POWER TRANSFORMER
T400mAL250V
FU1
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
NEUTRAL
LIVE
AC POWER CORD

DISPLAY ASSY


STANDBY IND.
HE AND HB TYPES
KU AND HEWZI TYPES
MEMORY
MONO
BAND
DOWN
UP
POWER
RF ATT
AUTO /MANUAL
FREQ /STATION
AWE
AWZ
J1
J2
Q203 Q204 Q206
Q202
IC201
Q201

Note:For HEWZI type,PCB diagram is changed into the following:


For HEWZI TYPE
(N)
(L)
①
②
L301
POWER TRANSFORMER

Line Voltage Selection (For HEWZI)

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the L301 with the jumper-lines ① and ② follows.

Voltage	L301 or jumper—lines
220V—230V	Change the jumper—lines ① and ② into the L301.
240V	Change the L301 into the jumper—lines ① and ②.

NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual. jumper-lines on the PCB may have to be removed. Forgetting this check-up will cause a serious damage.

4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX−193	220V label
AAX−192	240V label

Line Volt

Line Voltage

1. Disconnec
2. Remove th
3. Change th

Voltage
220V−230
240V

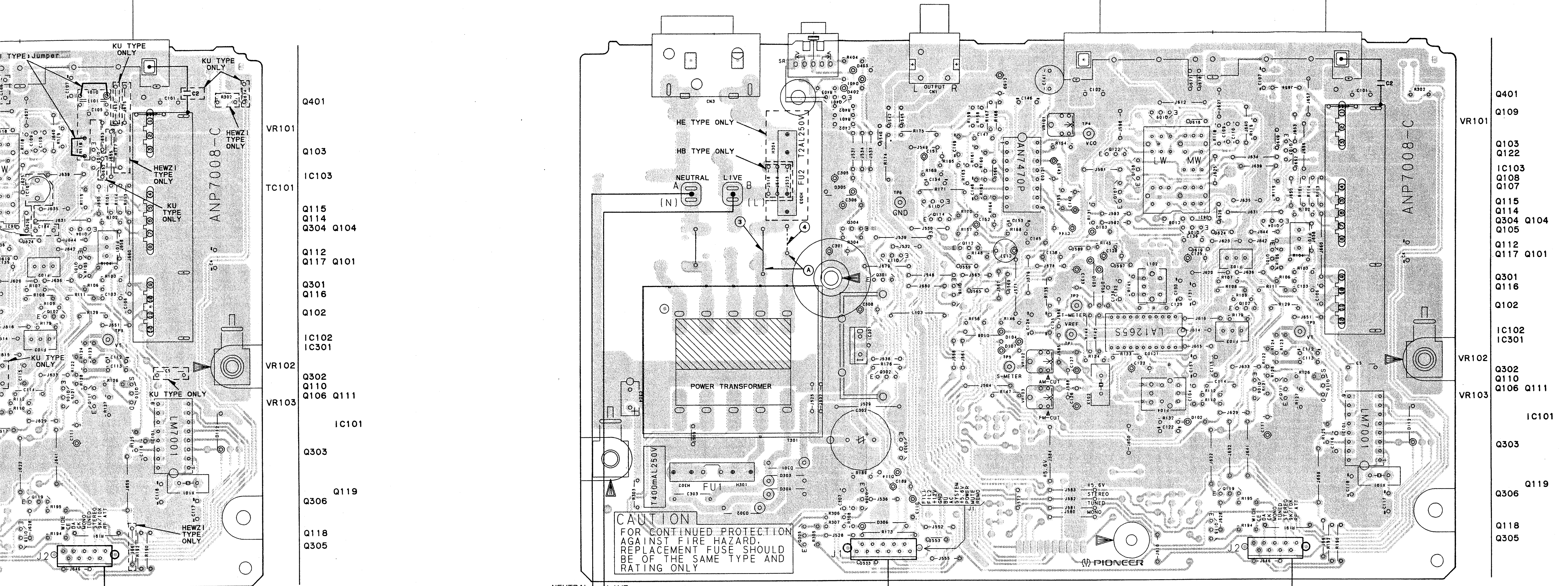
NOTE: Wher circui circui jump Forg

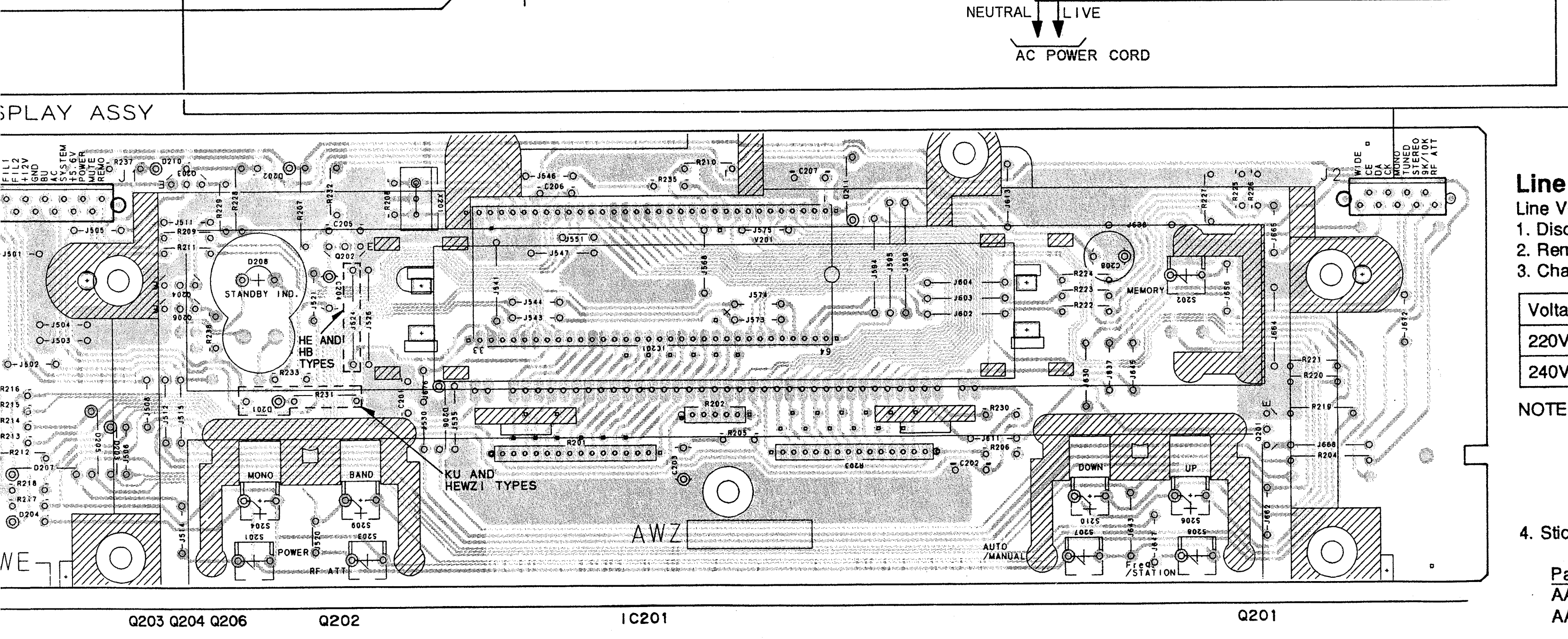
4. Stick the l

Part No.
AAX−1
AAX−1

This PCB connection diagram is viewed from the parts mounted side.

MAIN ASSY (For HE and HB types)


TYPE : Jumper
KU TYPE ONLY
KU TYPE ONLY
HEWZI TYPE ONLY
HEWZI TYPE ONLY
KU TYPE ONLY
ANP7008-C
KU TYPE ONLY
KU TYPE ONLY
LM7001
HEWZI TYPE ONLY
J2
VR101
TC101
VR102
VR103
Q401
Q103
IC103
Q115
Q114
Q304 Q104
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC301
Q302
Q110
Q106 Q111
IC101
Q303
Q119
Q306
Q118
Q305
HE TYPE ONLY
HB TYPE ONLY
NEUTRAL
LIVE
A
B
(N)
(L)
③
④
Ⓐ
FU2 T2AL250V
POWER TRANSFORMER
T400mAL250V
FU1
CAUTION
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD,
REPLACEMENT FUSE SHOULD
BE OF THE SAME TYPE AND
RATING ONLY
OUTPUT L R
GND
VCO
AN7470P
LW
MW
LA1265S
T-METER
VREF
S-METER
AM-CUT
FM-CUT
STEREO
TUNED
MONO
J1
J2
PIONEER
ANP7008-C
LM7001
VR101
VR102
VR103
Q401
Q109
Q103
Q122
IC103
Q108
Q107
Q115
Q114
Q304 Q104
Q105
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC301
Q302
Q110
Q106 Q111
IC101
Q303
Q119
Q306
Q118
Q305
A
B


NEUTRAL
LIVE
AC POWER CORD
SPLAY ASSY
STANDBY IND.
HE AND HB TYPES
KU AND HEWZI TYPES
MEMORY
MONO
BAND
POWER
RF ATT
AWZ
AUTO /MANUAL
DOWN
UP
Freq /STATION
J2
Q203 Q204 Q206
Q202
IC201
Q201

Line Voltage Selection (For HE and HB)

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the position of the jumper-lines Ⓐ follows.

Voltage	jumper—line Ⓐ position
220V—230V	③
240V	④

NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual. jumper-lines on the PCB may have to be removed. Forgetting this check-up will cause a serious damage.

4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX—193	220V label
AAX—192	240V label

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wirng symbols listed in the following Table.

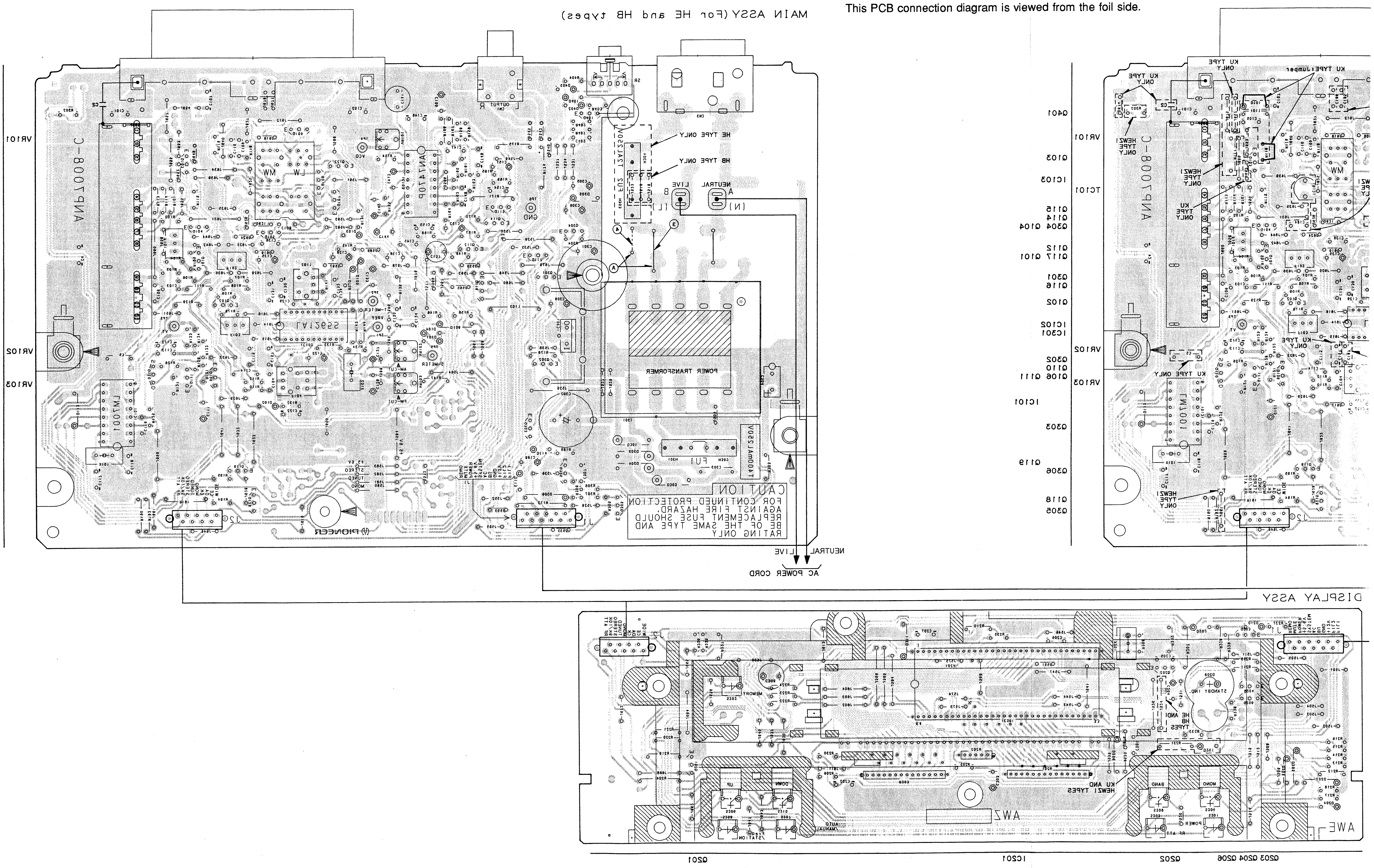
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

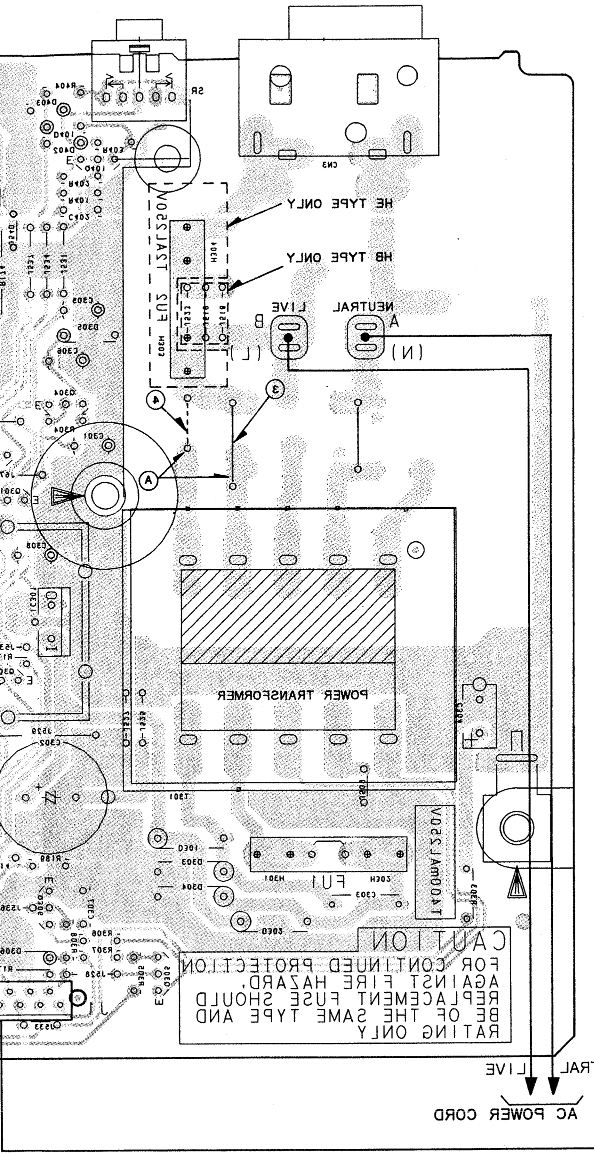
3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

This PCB connection diagram is viewed from the foil side.

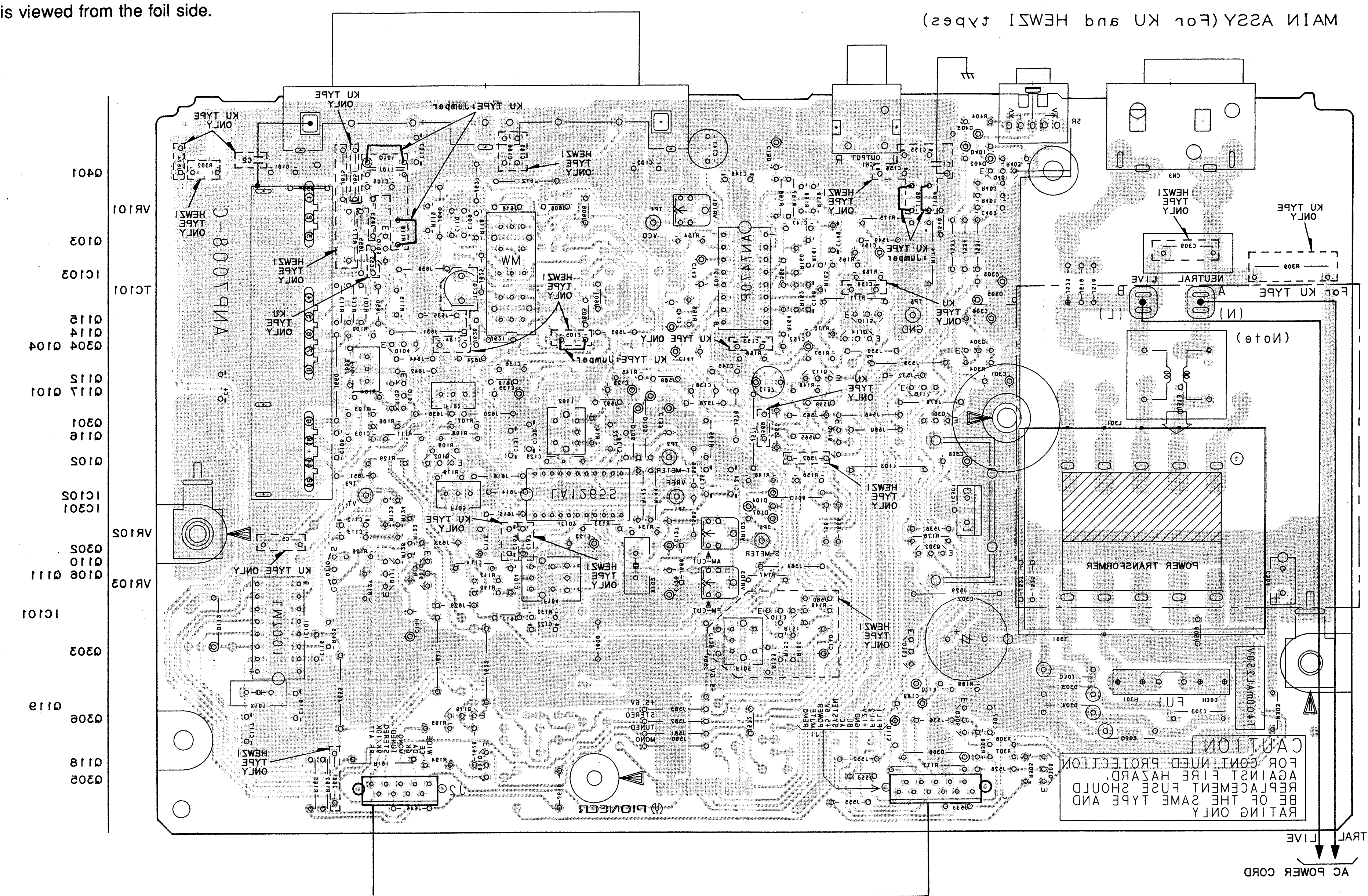

MAIN ASSY (For HE and HB types)
DISPLAY ASSY
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
POWER TRANSFORMER
HE TYPE ONLY
HB TYPE ONLY
LIVE
NEUTRAL
AC POWER CORD
KU TYPE ONLY
KU TYPE jumper
HEWZ1 TYPE ONLY
KU AND HEWZ1 TYPES
HE AND HB TYPES
STANDBY IND.
MEMORY
AWZ
AWE
ANP7008-C
VR101
VR102
VR103
IC101
IC102
IC103
IC301
IC201
Q101
Q102
Q103
Q104
Q105
Q106
Q107
Q108
Q109
Q110
Q111
Q112
Q114
Q115
Q116
Q117
Q118
Q119
Q122
Q201
Q202
Q203
Q204
Q206
Q301
Q302
Q303
Q304
Q305
Q306
Q401
GND
OUTPUT
FU1
LA1140
SSS9
LM7001
PIONEER

This PCB connection diagram is viewed from the foil side.

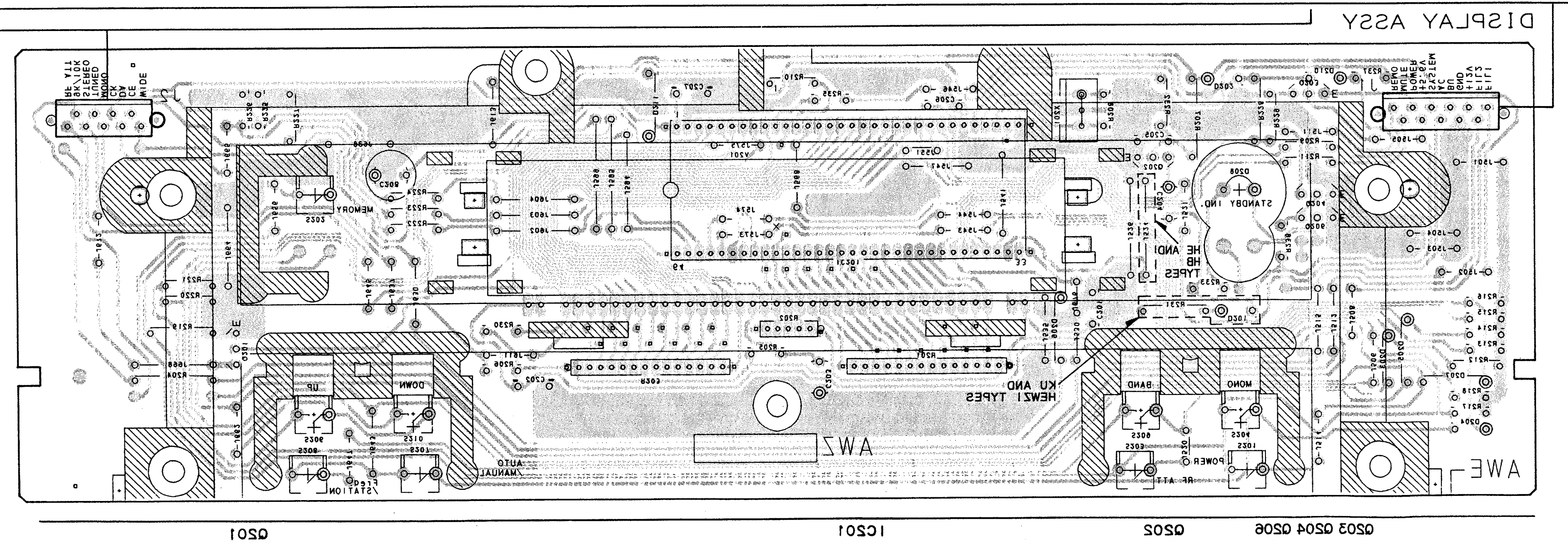
MAIN ASSY (For HE and HB types)


HE TYPE ONLY
HB TYPE ONLY
LIVE
NEUTRAL
B
A
(L)
(N)
POWER TRANSFORMER
FU1
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
LIVE
NEUTRAL
AC POWER CORD

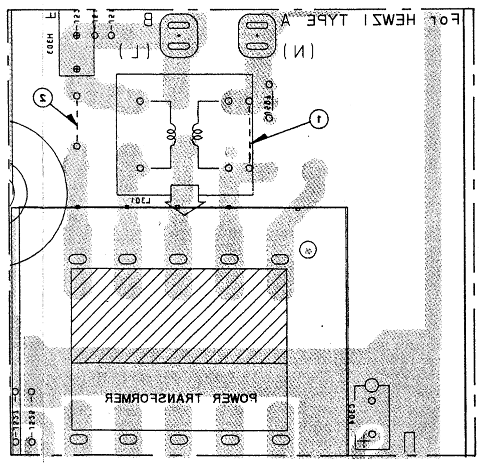
MAIN ASSY (For KU and HEWZ1 types)


Q401
VR101
Q103
IC103
IC101
Q115
Q114
Q304 Q104
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC301
VR102
Q302
Q110
Q111 Q108
VR103
IC101
Q303
Q119
Q306
Q118
Q305
KU TYPE ONLY
KU TYPE jumper
HEWZ1 TYPE ONLY
KU TYPE ONLY
KU TYPE jumper
For KU TYPE
LIVE
NEUTRAL
(Note)
POWER TRANSFORMER
FU1
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSE SHOULD BE OF THE SAME TYPE AND RATING ONLY
LIVE
NEUTRAL
AC POWER CORD
PIONEER

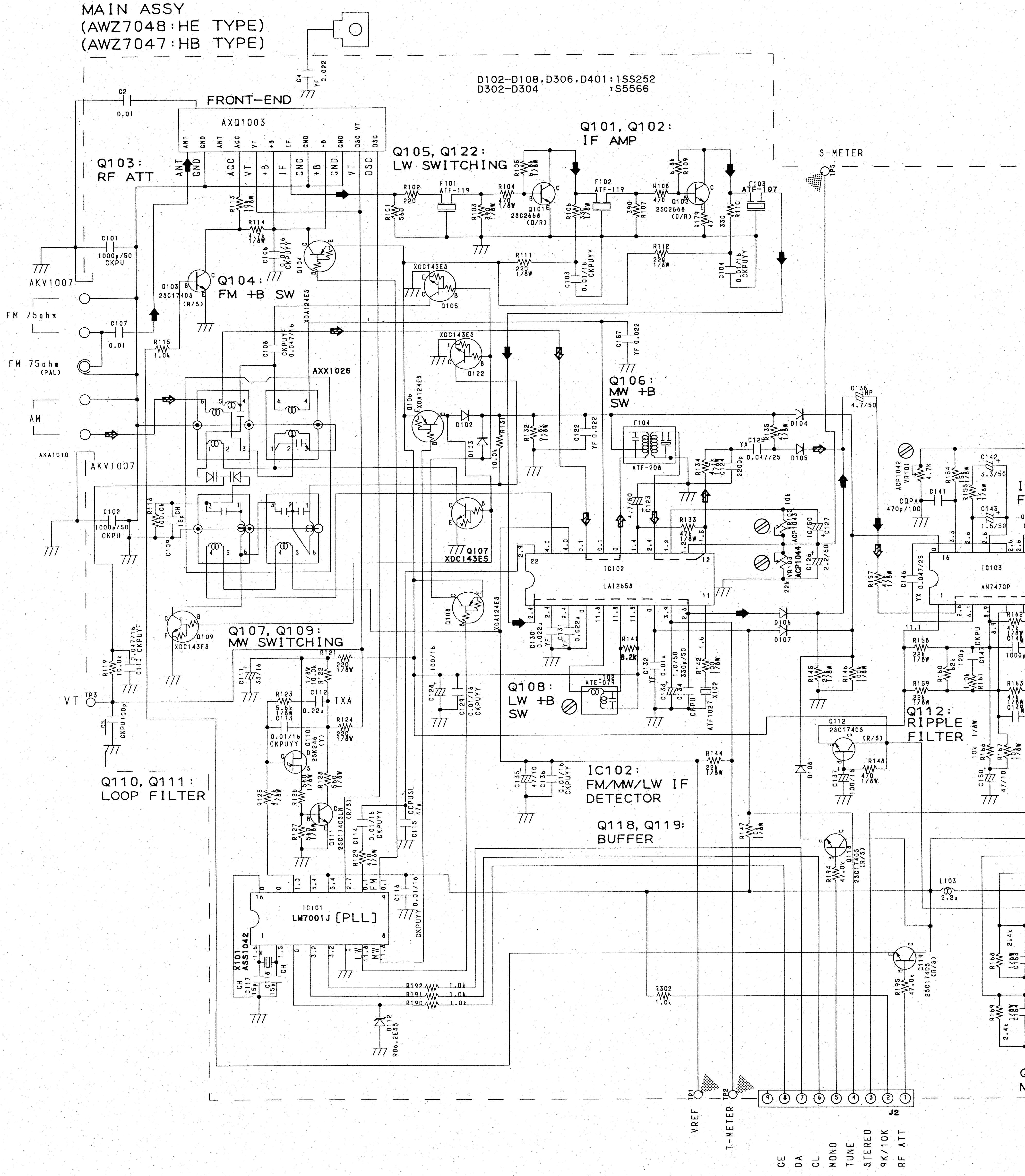
DISPLAY ASSY

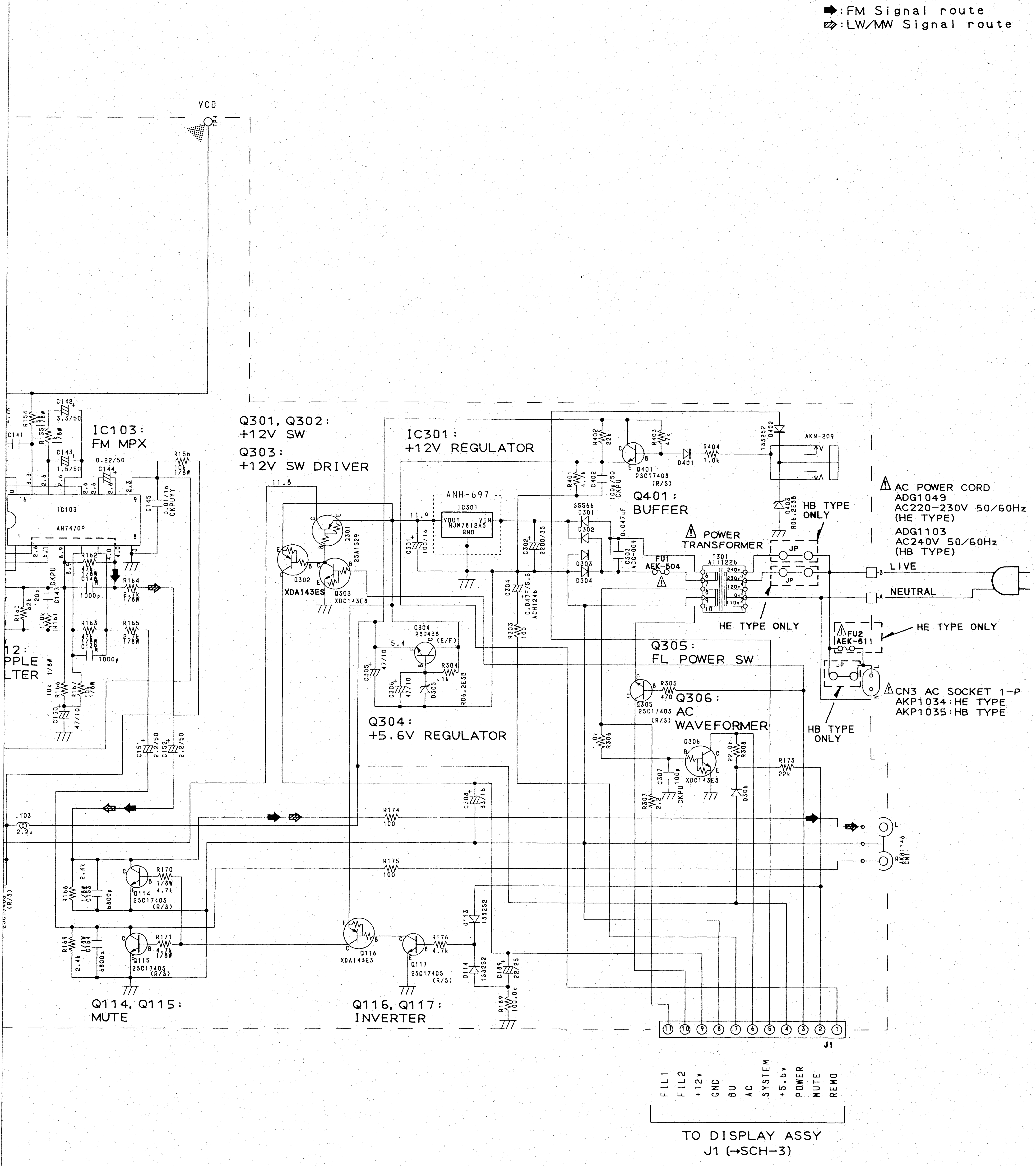

MEMORY
STANDBY IND
HE AND HB TYPES
KU AND HEWZ1 TYPES
UP
DOWN
BAND
MONO
AUTO MANUAL
POWER
AWZ
AWE
Q201
IC201
Q202
Q203 Q204 Q206

Note: For HEWZ1 type, PCB diagram is changed into the following:

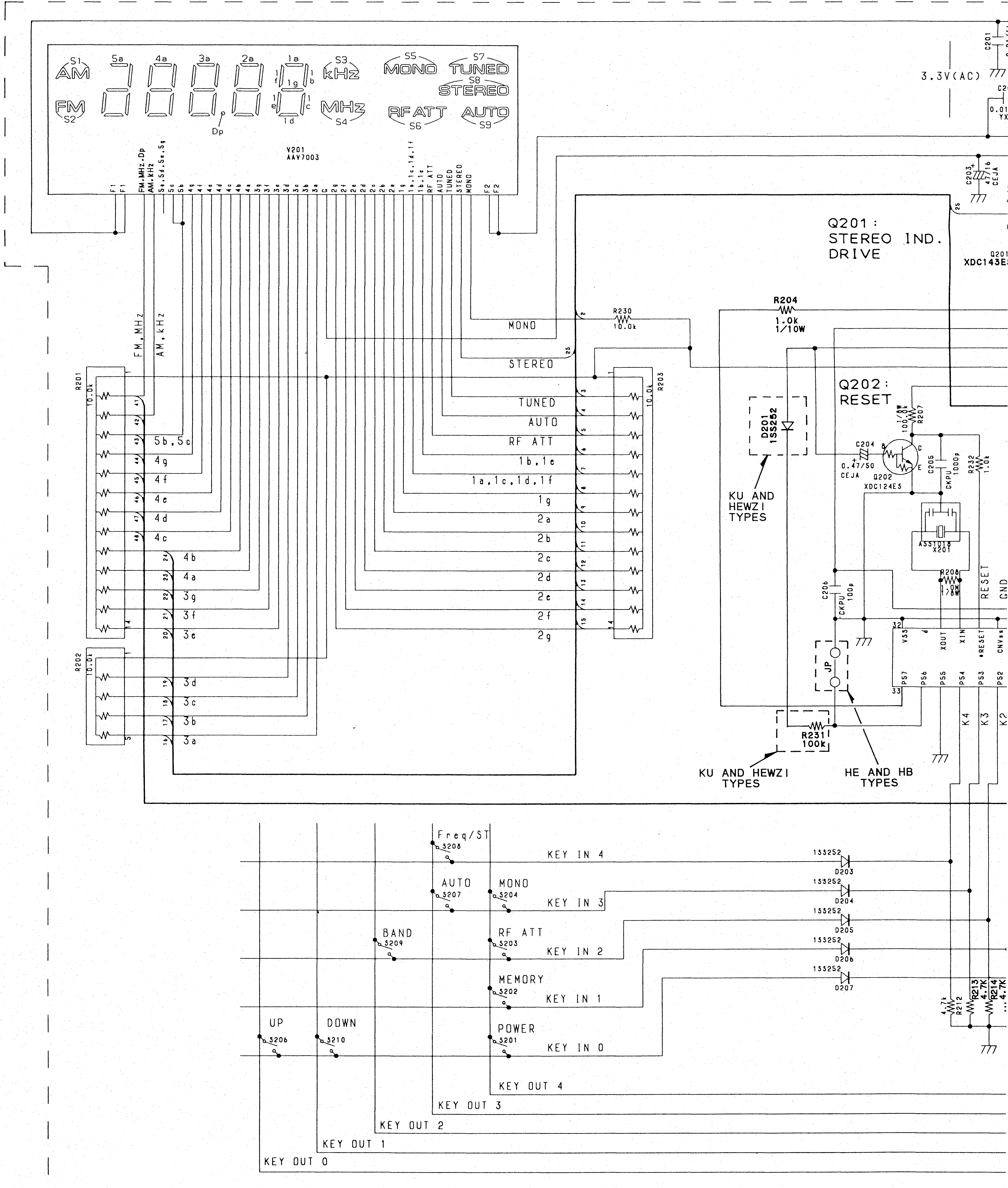

For HEWZ1 TYPE
A
B
(N)
(L)
POWER TRANSFORMER

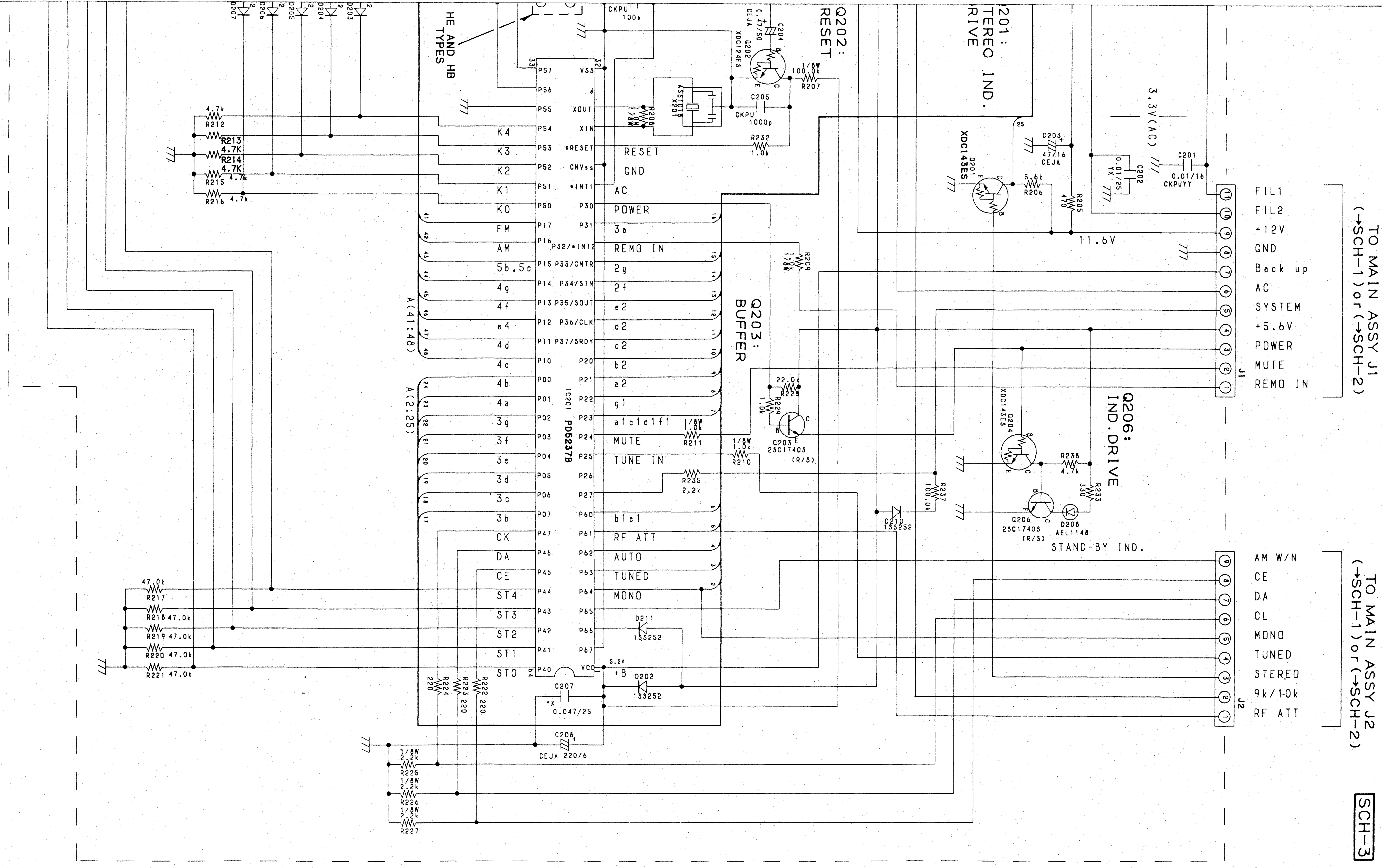
3.2 MAIN ASSY (For HE and HB types)


MAIN ASSY
(AWZ7048:HE TYPE)
(AWZ7047:HB TYPE)
D102–D108,D306,D401:1SS252
D302–D304 :S5566
FRONT-END
AXQ1003
ANT
GND
ACC
VT
+B
IF
GND
+B
GND
VT
OSC
Q103:
RF ATT
Q101, Q102:
IF AMP
Q105, Q122:
LW SWITCHING
Q104:
FM +B SW
AKV1007
FM 75ohm
FM 75ohm (PAL)
AM
AKA1010
AXX1026
Q106:
MW +B
SW
S-METER
Q107, Q109:
MW SWITCHING
Q108:
LW +B
SW
IC102
LA1265S
IC102:
FM/MW/LW IF
DETECTOR
Q118, Q119:
BUFFER
Q110, Q111:
LOOP FILTER
IC101
LM7001J [PLL]
X101
ASS1042
Q112:
RIPPLE
FILTER
IC103
AN7470P
VT
TP3
VREF
T-METER
J2
CE
DA
CL
MONO
TUNE
STEREO
9K/10K
RF ATT
TO DISPLAY ASSY
J2 (→SCH-3)


➡:FM Signal route
⇨:LW/MW Signal route
VCO
TP4
IC103:
FM MPX
IC103
AN7470P
12:
PPLE
LTER
Q301, Q302:
+12V SW
Q303:
+12V SW DRIVER
IC301:
+12V REGULATOR
ANH-697
IC301
NJM7812AS
VOUT
VIN
GND
Q304:
+5.6V REGULATOR
Q401:
BUFFER
⚠ POWER
TRANSFORMER
T301
ATT1226
FU1
AEK-504
⚠ AC POWER CORD
ADG1049
AC220–230V 50/60Hz
(HE TYPE)
ADG1103
AC240V 50/60Hz
(HB TYPE)
LIVE
NEUTRAL
HE TYPE ONLY
HB TYPE
ONLY
JP
⚠FU2
AEK-511
⚠CN3 AC SOCKET 1-P
AKP1034:HE TYPE
AKP1035:HB TYPE
AKN-209
Q305:
FL POWER SW
Q306:
AC
WAVEFORMER
Q114, Q115:
MUTE
Q116, Q117:
INVERTER
AKB1146
CN1
J1
FIL1
FIL2
+12v
GND
BU
AC
SYSTEM
+5.6v
POWER
MUTE
REMO
TO DISPLAY ASSY
J1 (→SCH-3)

DISPLAY ASSY(AWZ7043:KU TYPE)
(AWZ7041:HE AND HB TYPES)
(AWZ7042:HEWZI TYPE)


S1 AM
S2 FM
5a
4a
3a
2a
1a
1g
Dp
1d
S3 kHz
S4 MHz
S5 MONO
S6 RF ATT
S7 TUNED
S8 STEREO
S9 AUTO
V201
AAV7003
F1
FM,MHz,Dp
AM,kHz
5a,5d,5e,5g
5c
5b
4g
4f
4e
4d
4c
4b
4a
3g
3f
3e
3d
3c
3b
3a
C
2g
2f
2e
2d
2c
2b
2a
1g
1a,1c,1d,1f
1b,1e
RF ATT
AUTO
TUNED
STEREO
MONO
F2
3.3V(AC)
C201
C203
47/16
CEJA
Q201:
STEREO IND.
DRIVE
Q201
XDC143E
FM,MHz
AM,kHz
R201
10.0k
R202
10.0k
R203
10.0k
R230
10.0k
5b,5c
4g
4f
4e
4d
4c
4b
4a
3g
3f
3e
3d
3c
3b
3a
MONO
STEREO
TUNED
AUTO
RF ATT
1b,1e
1a,1c,1d,1f
1g
2a
2b
2c
2d
2e
2f
2g
R204
1.0k
1/10W
D201
1SS252
KU AND
HEWZI
TYPES
Q202:
RESET
C204
0.47/50
CEJA
Q202
XDC124ES
R207
100.0k
1/8W
C205
CKPU
1000p
R232
1.0k
ASS1019
X201
R208
1.0M
1/8W
C206
CKPU
100p
JP
R231
100k
KU AND HEWZI
TYPES
HE AND HB
TYPES
VSS
XOUT
XIN
RESET
CNVss
PS7
PS6
PS5
PS4
PS3
PS2
RESET
GND
K4
K3
K2
Freq/ST
S208
AUTO
S207
MONO
S204
BAND
S209
RF ATT
S203
MEMORY
S202
UP
S206
DOWN
S210
POWER
S201
KEY IN 4
KEY IN 3
KEY IN 2
KEY IN 1
KEY IN 0
KEY OUT 4
KEY OUT 3
KEY OUT 2
KEY OUT 1
KEY OUT 0
1SS252
D203
D204
D205
D206
D207
R212
4.7k
R213
4.7K
R214
4.7K


HE AND HB TYPES
CKPU 100p
Q202: RESET
201: STEREO IND. DRIVE
C204 0.47/50 CEJA
Q202 XDC124ES
R207 1/8W 100.0k
X201 ASS1018
R208
C205 CKPU 1000p
R232 1.0k
RESET
GND
AC
POWER
3a
REMO IN
2g
2f
e2
d2
c2
b2
a2
g1
a1c1d1f1
MUTE
TUNE IN
b1e1
RF ATT
AUTO
TUNED
MONO
R212 4.7k
R213 4.7K
R214 4.7K
R215 4.7k
R216 4.7k
K4
K3
K2
K1
K0
FM
AM
5b,5c
4g
4f
e4
4d
4c
4b
4a
3g
3f
3e
3d
3c
3b
CK
DA
CE
ST4
ST3
ST2
ST1
ST0
A(41:48)
A(2:25)
P57
P56
P55
P54
P53
P52
P51
P50
P17
P16 P32/*INT2
P15 P33/CNTR
P14 P34/SIN
P13 P35/SOUT
P12 P36/CLK
P11 P37/SRDY
P10
P00
P01
P02
P03
P04
P05
P06
P07
P47
P46
P45
P44
P43
P42
P41
P40
VSS
XOUT
XIN
*RESET
CNVss
*INT1
P30
P31
P20
P21
P22
P23
P24
P25
P26
P27
P60
P61
P62
P63
P64
P65
P66
P67
VCC
IC201 PD5237B
R217 47.0k
R218 47.0k
R219 47.0k
R220 47.0k
R221 47.0k
R224 220
R223 220
R222 220
C207 YX 0.047/25
C208 CEJA 220/6
5.2V +B
D211 1SS252
D202 1SS252
R225 1/8W 2.2k
R226 1/8W 2.2k
R227 1/8W 2.2k
R211 1/8W 1.0k
R210 1/8W 1.0k
R235 2.2k
R209 1/8W 1.0k
Q203: BUFFER
R228 22.0k
R229 1.0k
Q203 2SC1740S (R/S)
3.3V(AC)
C203 47/16 CEJA
Q201 XDC143ES
R206 5.6k
R205 470
C202 0.01/25 YX
C201 0.01/16 CKPUYY
11.6V
Q204 XDC143ES
Q206: IND.DRIVE
R238 4.7k
R233 330
R237 100.0k
D210 1SS252
Q206 2SC1740S (R/S)
D208 AEL1148
STAND-BY IND.
FIL1
FIL2
+12V
GND
Back up
AC
SYSTEM
+5.6V
POWER
MUTE
REMO IN
J1
TO MAIN ASSY J1 (→SCH-1)or(→SCH-2)
AM W/N
CE
DA
CL
MONO
TUNED
STEREO
9k/10k
RF ATT
J2
TO MAIN ASSY J2 (→SCH-1)or(→SCH-2)
SCH-3

DISPLAY ASSY

SCH-3

4/

4. PCB PARTS LIST

(For F−C3/KU and HE)

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56×10^{1} → 561 .... RD1/8PM$\boxed{5}\boxed{6}\boxed{1}$J
47kΩ → 47×10^{3} → 473 .... RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
0.5Ω → 0R5 .... RN2H$\boxed{0}\boxed{R}\boxed{5}$K
1Ω → 010 .... RS1P$\boxed{0}\boxed{1}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62kΩ → 562×10^{1} → 5621 .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

LIST OF ASSEMBLIES

Mark	No.	Description	Parts No.	Mark
		TUNER ASSEMBLY (For HE type)	AWE7002	
		├─ DISPLAY ASSEMBLY	AWZ7041	
		└─ MAIN ASSEMBLY	AWZ7048	
		TUNER ASSEMBLY (For KU type)	AWE7004	
		├─ DISPLAY ASSEMBLY	AWZ7043	
		└─ MAIN ASSEMBLY	AWZ7050	

DISPLAY ASSEMBLY (For KU and HE types)

SEMICONDUCTORS

Mark	No.	Description	Parts No.	Mark
	IC201		PD5237B	
	Q203,Q206		2SC1740S	
	Q202		XDC124ES	
	Q201,Q204		XDC143ES	
	D201−D207,D210,D211		1SS252	
	D208		AEL1148	

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.	Mark
	S201−S204,S206−S210		ASG1034	

CAPACITORS

Mark	No.	Description	Parts No.	Mark
	C208		CEJA221M6	
	C203		CEJA470M16	
	C204		CEJAR47M50	
	C202		CKDYX103M25	
	C207		CKDYX473M25	
	C206		CKPUYB101K50	
	C205		CKPUYB102K50	
	C201		CKPUYY103M16	

RESISTORS

Mark	No.	Description	Parts No.	Mark
	R201,R203		RA13T103J	
	R202		RA4T103J	
		Other Resistors	RD1/8PM□□□J	

OTHERS

Mark	No.	Description	Parts No.	Mark
	X201	(4.19MHz)	ASS1018	
	V201	FL TUBE	AAV7003	

MAIN ASSEMBLY (For HE type)

SEMICONDUCTORS

Mark	No.	Description	Parts No.	Mark
	IC103		AN7470P	
	IC102		LA1265S	
	IC101		LM7001J	
	IC301		NJM7812AS	
	Q301		2SA1529	
	Q103,Q112,Q114,Q115		2SC1740S	
	Q117−Q119,Q305,Q401		2SC1740S	
	Q111		2SC1740SLN	
	Q101,Q102		2SC2668	
	Q304		2SD438	
	Q110		2SK246	
	Q104,Q106,Q108		XDA124ES	
	Q116,Q302		XDA143ES	
	Q105,Q107,Q109,Q122,Q303		XDC143ES	
	Q306		XDC143ES	
	D102−D108,D113,D114,D306		1SS252	
	D401,D402		1SS252	
	D112,D305,D403		RD6.2ESB	
	D301−D304		S5566	

COILS AND FILTERS

Mark	No.	Description	Parts No.	Mark
	L102		ATE−079	
	F101,F102		ATF−119	
	F103		ATF−107	
	F104		ATF−208	
	L103		LAU2R2K	

TRANSFORMERS

Mark	No.	Description	Parts No.	Mark
⚠	T301	(6.5VA)	ATT1226	

CAPACITORS

Mark	No.	Description	Parts No.	Mark
	C303	(0.047/AC25V)	ACG−009	
	C304	(47000/5.5)	ACH1246	
	C109,C117,C118		CCDCH150J50	
	C115		CCPUSL470J50	
	C138		CEANP4R7M50	
	C133		CEAS010M50	
	C127		CEAS100M50	
	C128,C137,C301		CEAS101M16	
	C143		CEAS1R5M50	
	C189		CEAS220M25	
	C302		CEAS222M35	

Mark	No.	Description	Parts No.	Mark
	C126,C151,C152		CEAS2R2M50	
	C111		CEAS330M16	
	C142		CEAS3R3M50	
	C135,C150,C305,C306		CEAS470M10	
	C123		CEAS4R7M50	
	C144		CEASR22M50	
	C308		CEHAQ330M16	
	C112		CFTXA224J50	
	C107,C2		CKDYB103K50	
	C124		CKDYB222K50	
	C153,C154		CKDYB682K50	
	C132		CKDYF103Z50	
	C122,C130,C131,C157,C4		CKDYF223Z50	
	C125,C146		CKDYX473M25	
	C307,C402,C5		CKPUYB101K50	
	C101,C102		CKPUYB102K50	
	C147		CKPUYB121K50	
	C134		CKPUYB331K50	
	C108,C110		CKPUYF473Z16	
	C103,C104,C106,C113,C114		CKPUYY103M16	
	C116,C129,C136,C145		CKPUYY103M16	
	C148,C149		CQMA102J50	
	C141		CQPA471J100	
RESISTORS				
	VR101	(4.7k)	ACP1042	
	VR102	(10k)	ACP1043	
	VR103	(22k)	ACP1044	
		Other Resistors	RD1/8PM□□□J	
OTHERS				
	X101	(7.200MHz)	ASS1042	
	X102	(450kHz)	ATF1027	
		SCREW	ABA1012	
		ANTENNA TERMINAL 4−P	AKA1010	
		PIN JACK(2P)	AKB1146	
		JACK	AKN−209	
⚠		AC SOCKET 1−P	AKP1034	
		AM RF TUNING BLOCK	AXX1026	
		3−serial F.E.module assembly	AXQ1003	

Note:
3−serial F.E.module assembly has no service part.

MAIN ASSEMBLY (For KU type)

Mark	No.	Description	Parts No.	Mark
SEMICONDUCTORS				
	IC103		AN7470P	
	IC102		LA1265S	
	IC101		LM7001J	
	IC301		NJM7812AS	
	Q301		2SA1529	
	Q103,Q112,Q114,Q115		2SC1740S	
	Q117−Q119,Q305,Q401		2SC1740S	
	Q111		2SC1740SLN	
	Q101,Q102		2SC2668	
	Q304		2SD438	
	Q110		2SK246	
	Q104,Q106		XDA124ES	
	Q116,Q302		XDA143ES	
	Q303,Q306		XDC143ES	
	D104−D108,D113,D114,D306		1SS252	
	D401,D402		1SS252	
	D112,D305,D403		RD6.2ESB	
	D301−D304		S5566	
COILS AND FILTERS				
	L102		ATE−079	
	F103		ATF−107	
	F101,F102		ATF−119	
⚠	L301		ATF−163	
	F104		ATF−208	
	L103		LAU2R2K	
TRANSFORMERS				
⚠	T301	(6.5VA)	ATT1226	
CAPACITORS				
	C303	(0.047/AC25V)	ACG−009	
	C304	(47000/5.5)	ACH1246	
	C109,C117,C118		CCDCH150J50	
	C115		CCPUSL470J50	
	C138		CEANP4R7M50	
	C133		CEAS010M50	
	C127		CEAS100M50	
	C128,C137,C301		CEAS101M16	
	C143		CEAS1R5M50	
	C189		CEAS220M25	
	C302		CEAS222M35	
	C126,C151,C152		CEAS2R2M50	
	C111		CEAS330M16	
	C142		CEAS3R3M50	
	C135,C150,C305,C306		CEAS470M10	
	C123		CEAS4R7M50	
	C144		CEASR22M50	
	C308		CEHAQ330M16	
	C112		CFTXA224J50	
	C107,C2		CKDYB103K50	
	C124		CKDYB222K50	
	C132		CKDYF103Z50	
	C122,C130,C131,C157,C4		CKDYF223Z50	
	C153,C154		CKDYX103M25	
	C125,C146		CKDYX473M25	
	C307,C402,C5		CKPUYB101K50	
	C101,C102		CKPUYB102K50	
	C147		CKPUYB121K50	
	C134		CKPUYB331K50	
	C110		CKPUYF473Z16	
	C103,C104,C106,C113,C114		CKPUYY103M16	
	C116,C129,C136,C145		CKPUYY103M16	
	C148,C149		CQMA102J50	
	C141		CQPA471J100	
RESISTORS				
⚠	R309	(2.2M,1/2W)	ACN−208	
	VR101	(4.7k)	ACP1042	
	VR102	(10k)	ACP1043	
	VR103	(22k)	ACP1044	
		Other Resistors	RD1/8PM□□□J	
OTHERS				
	X101	(7.200MHz)	ASS1042	
	X102	(450kHz)	ATF1027	
		SCREW	ABA1012	
		ANTENNA TERMINAL 4−P	AKA1009	
		PIN JACK(2P)	AKB1146	
		JACK	AKN−209	
⚠		AC SOCKET 1−P	AKP1078	
		AM RF TUNING BLOCK	AXX1025	
		3−serial F.E.module assembly	AXQ1003	

Note:
3−serial F.E.module assembly has no service part.

5. ADJUSTMENTS

ADJUSTMENT OF THE FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in the Fig. 1.

Step No.	Adjustment Title	FM SG(1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment	
		Frequency(MHz)	Level(dBμV)		Adjustment Location	Specifications
1	Center adjustment	98	60	98.0MHz	L102	Adjust so that the DC voltage between the TP1(VREF) and TP2(T−METER) becomes 0V±50mV.
2	VCO adjustment	Non modulation	60	98.0MHz	VR101	Adjust so that the output of the TP4 (VCO) becomes 76kHz ±0.5kHz.
3	TUNED IND. Lighting level	98	24 (±3dB)	98.0MHz	VR103	Adjust so that the indicators of TUND IND. start to light up.

ADJUSTMENT OF MW TUNER SECTION

- Set the mode selector to AM(MW) BAND.
- Connect the wiring as shown in the Fig. 1.

Step No.	Adjustment Title	AM SG(400Hz, 30% Mod.)		Reception Frequency Display	Adjustment	
		Frequency(kHz)	Level(dBμV/m)		Adjustment Location	Specifications
1	Tracking adjustment *2	603	Low input	603kHz	AM RF Tuning block antenna coil	Adjust so that the DC voltage between the TP5(S−METER) and GND becomes at maximum level.
2		1395		1395kHz	TC101	
3	IFT adjustment *2	603		603kHz	F104	
4	TUNED IND. Lighting level	999 *1	55 (±5dB)	999kHz *1	VR102	Adjust so that the indicator of TUNED IND. start to lights up.

Note1:

For the area using 10kHz step (KU type : 10kHz), frequencies should be as follows:

**1 : 1000kHz*

Note2:

*Adjustment marked with "*2" is only for HEWZI type.*

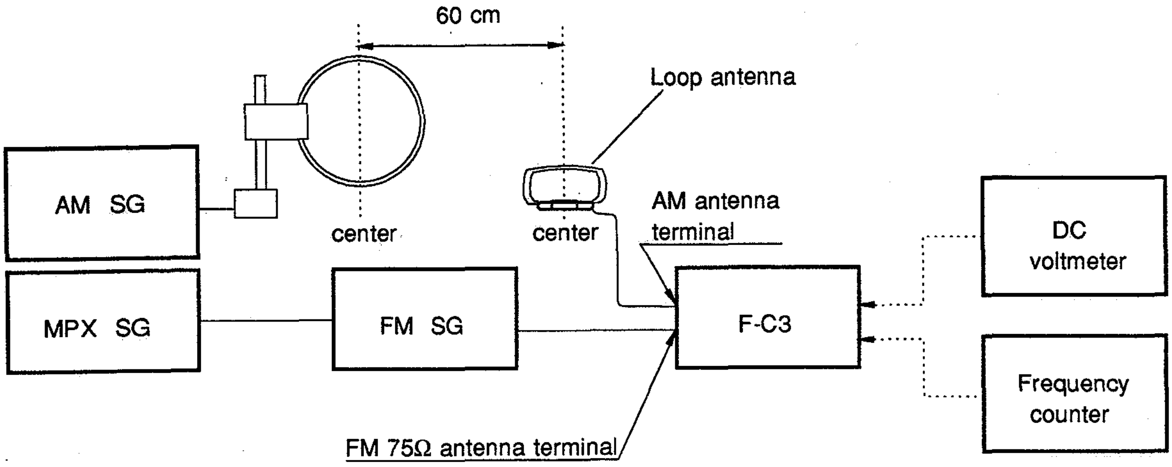
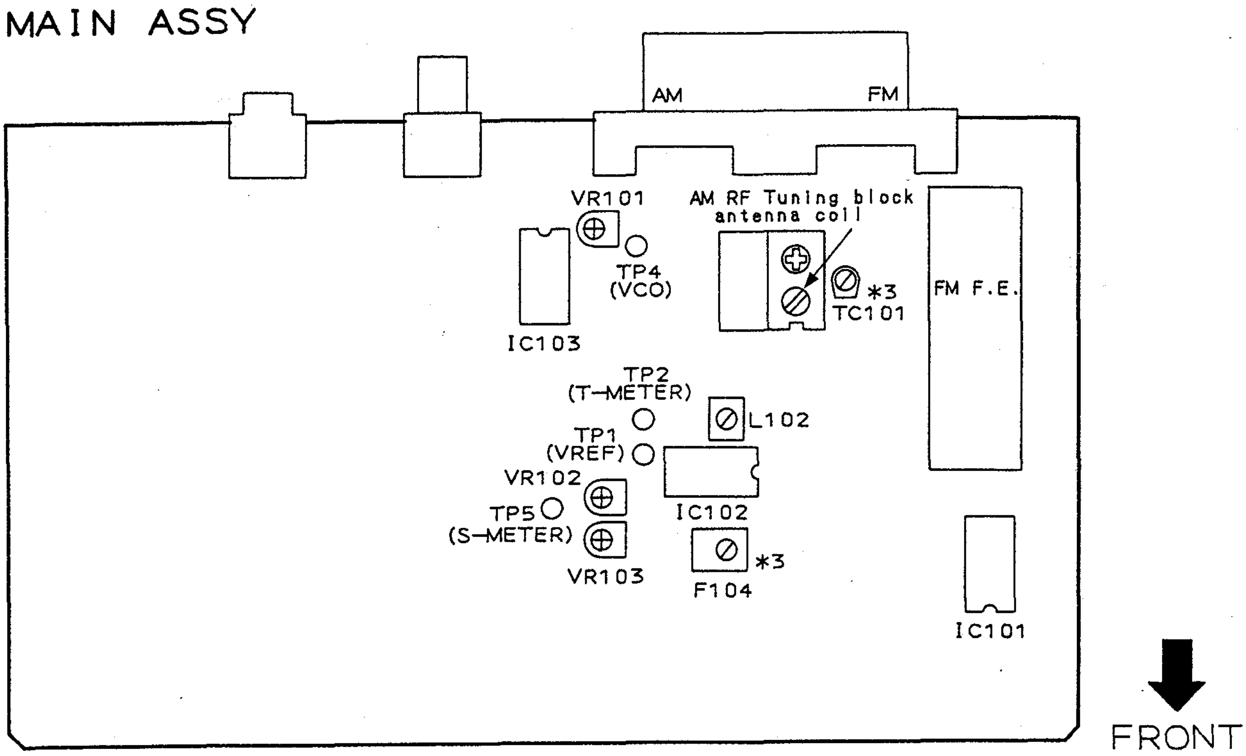

60 cm
Loop antenna
AM SG
center
center
AM antenna terminal
DC voltmeter
MPX SG
FM SG
F-C3
Frequency counter
FM 75Ω antenna terminal

Fig. 1 AM and FM adjustment wiring diagram


MAIN ASSY
AM
FM
VR101
AM RF Tuning block antenna coil
TP4 (VCO)
*3
TC101
FM F.E.
IC103
TP2 (T-METER)
L102
TP1 (VREF)
VR102
IC102
TP5
(S-METER)
*3
VR103
F104
IC101
FRONT

*3 : HEWZI type only

Fig. 2 Adjustment points

6. FOR HEWZI AND HB TYPES

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

6.1 CONTRAST OF MISCELLANEOUS PARTS FOR HEWZI TYPE

F-C3/HEWZI and F-C3/KU have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/KU	F-C3/HEWZI	
	TUNER assembly	AWE7004	AWE7003	
	DISPLAY assembly	AWZ7043	AWZ7042	
	MAIN assembly	AWZ7050	AWZ7049	
	Screw (STEEL)	....	ABA1047	Refer to P.5
⚠	AC power cord	ADG1058	ADG1049	
	FM antenna	ADH1005	ADH1002	
⚠	FU1 Fuse (500mA/125V)	AEK−136	....	
⚠	FU1 Fuse (T400mA/250V)	....	AEK−504	
	Cord stopper	AEP−113	AEC−882	
	Packing case	AHD7015	AHD7014	
	Sub panel	AMB7073	AMB7029	
	Front panel	AMB7079	AMB7027	
	Rear panel	ANC7060	ANC7057	
	Operating instructions (English)	ARB7005	....	
	Operating instructions (German/Italian)	....	ARC7005	
NSP	PCB post	....	DEC1390	
	65 label	ORW1069	....	

MAIN ASSEMBLY
AWZ7049 and AWZ7050 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7050	AWZ7049	
	FE module assembly (3L)	AXQ1003	....	
	FE module assembly (4L)	....	AXQ1004	
	AM RF tuning block (MW)	AXX1025	AXX1027	
	D101	....	1SV156	
	Q113	....	2SC1740S	
	R116	....	RD1/8PM270J	
	R117	....	RD1/2PM681J	
	R149	....	RD1/8PM224J	
	R150	....	RD1/8PM473J	
	R151	....	RD1/8PM222J	
	R152	....	RD1/8PM152J	

Mark	Symbol & Description	Part No.		Remarks
		AWZ7050	AWZ7049	
	R153	············	RD1/8PM392J	
	R160	RD1/8PM623J	RD1/8PM473J	
	R168,R169	RD1/8PM242J	RD1/8PM912J	
	R302	············	RD1/8PM102J	
⚠	R309	ACN−208	············	
	C1	············	CKDYX103M25	
	C2	CKDYB103K50	············	
	C5	CKPUYB101K50	············	
	C105	············	CKDYB103K50	
	C110	CKPUYF473Z16	CKDYX473M25	
	C139	············	CKDYB122K50	
	C140	············	CEAS4R7M50	
	C153,C154	CKDYX103M25	············	
	C155,C156	············	CKDYB332K50	
	C157	CKDYF223Z50	············	
	C184	············	CKPUYF223Z25	
	C185	············	CKPUYB101K50	
	C186	············	CKPUYB102K50	
	C187	············	CCPUSL270J50	
⚠	C309	············	ACG1002	
	TC101	············	ACM−018	
	F105	············	ATF1088	
	L101	············	LAU2R2J	
	L104,L106	············	LAU2R2K	
	L105	············	LAU330J	
	L301	ATF−163	ATF1135	
	Antenna terminal 4−P	AKA1009	············	
	Antenna terminal PAL 2−P	············	AKA1012	
⚠	CN3 AC socket 1−P	AKP1078	AKP1034	

DISPLAY ASSEMBLY

Although AWZ7042 and AWZ7043 are different in part number, they consist of the same components.

6.2 CONTRAST OF MISCELLANEOUS PARTS FOR HB TYPE

F-C3/HB and F-C3/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HB	
	TUNER assembly	AWE7002	AWE7001	
	MAIN assembly	AWZ7048	AWZ7047	

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HB	
⚠	AC power cord	ADG1049	ADG1103	
	Binder	....	AEC−093	Refer to P.5
⚠	FU2 Fuse (T2A/250V)	AEK−511	....	
	Rear panel	ANC7058	ANC7059	
	Operating instructions (English/German/French/Italian/Swedish/Spanish/Dutch/Portuguese)	ARE7010	....	
	Operating instructions (English)	....	ARB7005	
	Sub operating instructions (English/German/French/Italian/Swedish/Spanish/Dutch/Portuguese)	ARH7003	....	

MAIN ASSEMBLY
AWZ7047 and AWZ7048 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7048	AWZ7047	
⚠	CN3 AC socket 1−P	AKP1034	AKP1035	

7. SPECIFICATIONS

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity (IHF)	12.7 dBf (1.2 µV/75 Ω)
50 dB Quieting Sensitivity	Mono; 18 dBf (2.2 µV/75 Ω)
	Stereo; 38.3 dBf (22.6 µV/75 Ω)
Sensitivity (DIN)	Mono; 1.0 µV/75 Ω
	Stereo; 35 µV/75 Ω
Signal-to-Noise Ratio	Mono; 78 dB (at 85 dBf)
	Stereo; 74 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN)	Mono; 62 dB
	Stereo; 60 dB
Distortion	0.3 % (1 kHz)
Alternate Channel Selectivity	60 dB (300 kHz)
Stereo Separation	40 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz ±1 dB
Image Response Ratio	50 dB
IF Response Ratio	90 dB
Antenna Input	75 Ω unbalanced
Output	650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range	
U.S. model	530 kHz to 1,700 kHz (Step 10 kHz)
U.K. model	531 kHz to 1,602 kHz (Step 9 kHz)
Sensitivity (IHF, Loop antenna)	350 µV/m
Selectivity	20 dB
Signal-to Noise Ratio	50 dB
Antenna	Loop Antenna
Output	150 mV (30 % MOD.)

LW Tuner Section (U.K. model only)

Frequency range	153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna)	1,500 µV/m
Selectivity	20 dB
Signal-to-Noise Ratio	50 dB
Antenna	Loop Antenna
Output	158 mV (30 % MOD.)

Miscellaneous

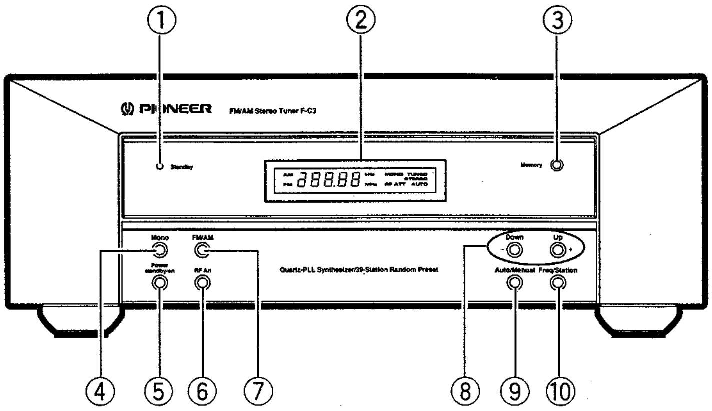
Power Requirements	
U.S. model	AC 120 V, 60 Hz
U.K. model	AC 240 Volts ~, 50/60 Hz
Power Consumption	10 W
Dimensions	260 (W) x 95.5 (H) x 336 (D) mm
	10-1/4 (W) x 3-3/4 (H) x 13-3/16 (D) in
Weight (without package)	2.3 kg (5 lb 1 oz)

Furnished Parts

FM T-type Antenna	1
AM Loop Antenna	1
Connecting Cord with Pin Plugs	1
Operating Instructions	1
Control cable	1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

8. PANEL FACILITIES



① **Standby indicator**
Goes out when power is turned on; lights when power is set to standby.

② **Display section**

③ **Memory button**

④ **Mono button**

⑤ **Power standby/on switch**
This is the switch for electric power.

On: When set to the on position, power is supplied and the unit becomes operational.

Standby: When set to the standby position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
When the Slandby indicator lights, the unit is in STANDBY.

⑥ **RF Att button**
Press this RF attenuator button if the excessive strenght of FM signals results in distortion. The RF ATT indicator will light in the display section.
- This function does not operate during AM broadcasts.

⑦ **FM/AM button**
Each time you press the button, the changes as follows.

→ FM → AM (MW) → AM (LW) ⌐

⑧ **Tuning Up+ Down− button**
Use to tune broadcast stations.

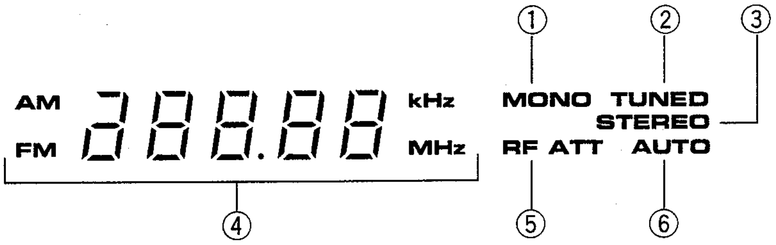
⑨ **Auto/Manual button**
When this button is pressed, the tuning function shanges alternately as follows:

→ Automatic tuning mode
("AUTO" indicator lights)
↓
Manual tuning mode
("AUTO" indicator goes out).

- *Auto tuning is not possible on the LW band.*

⑩ **Frequency/Station button**

Display Section



① **Lights when the Mono button is set to ON.**

② **Lights when broadcast is received.**

③ **Lights during reception of stereo broadcast.**

④ **Displays the frequency or station.**

⑤ **Lights when RF attenuator function is on.**

⑥ **Lights during auto tuning mode.**

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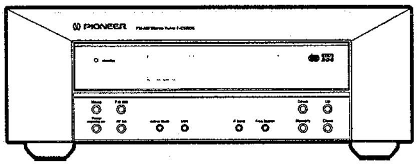
The Art of Entertainment

Service Manual



ORDER NO.
RRV1108

FM/AM DIGITAL SYNTHESIZER TUNER

F-C5RDS

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	F-C5RDS		
HE	○	AC220—230V	AC240V, ✱
HB	○	AC240V	AC220—230V, ✱
HEWZI	○	AC220—230V	AC240V, ✱

✱ : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

- **For HB and HEWZI types, refer to page 30.**

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10. SPECIFICATIONS ··· 33

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4209

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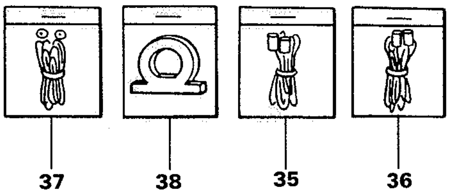
O-FFO MAY. 1994 Printed in Japan

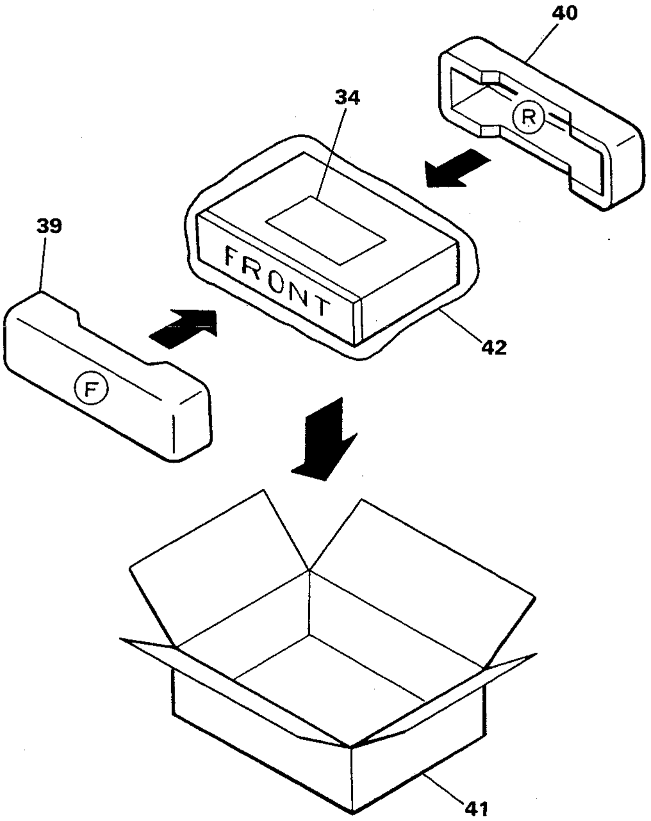
1. EXPLODED VIEWS, PACKING AND PARTS LIST

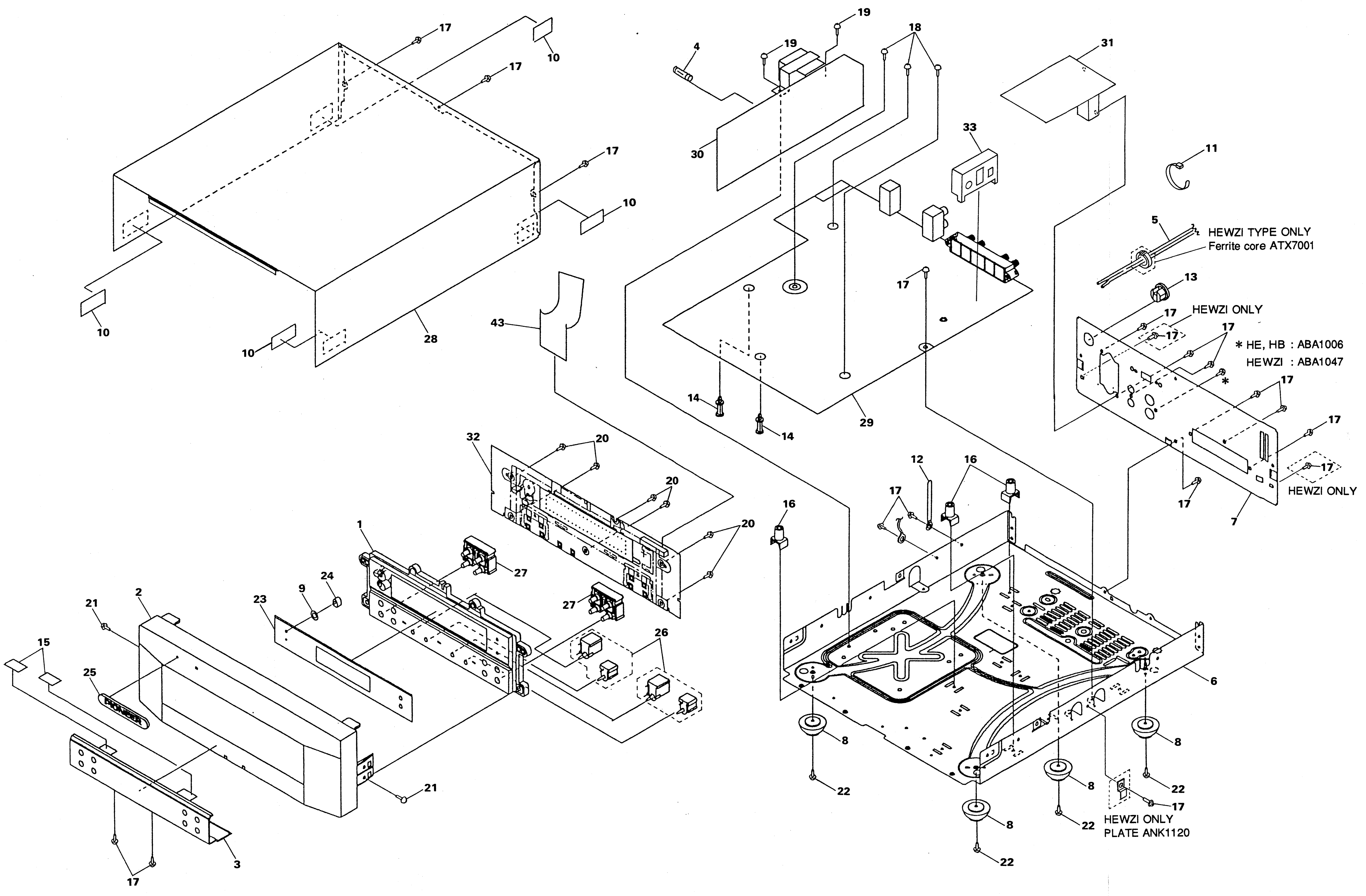
NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Mark	No.	Description	Parts No.
	1	SUB PANEL	AMB7029
	2	FRONT PANEL	AMB7080
	3	FRONT PANEL	ANB7005
⚠	4	FU1 FUSE (2.5A,250V)	AEK−512
⚠	5	AC POWER CORD	ADG1049
NSP	6	CHASSIS	ANA7006
	7	REAR PANEL	ANC7095
	8	INSULATOR	PNW2363
	9	WASHER	ABE7001
	10	CUSHON GUM	AEB7004
	11	NYLON BINDER	AEC−093
	12	BINDER	AEC−826
⚠	13	STRAIN RELIEF	AEC−882
	14	PCB SPACER(3X12)	AEC1372
	15	SPACER (PVC)	AEC7007
NSP	16	PCB MOULD	AMR1525
	17	SCREW (STEEL)	ABA1006
	18	SCREW	ABA1018
	19	SCREW (STEEL)	ABA1048
	20	SCREW	BBZ26P100FMC
	21	SCREW	BBZ30P080FZK
	22	SCREW	BBZ30P100FZK
	23	DISPLAY PANEL	AAK7071
	24	LED LENS	PNW2019
	25	NAME PLATE (AL)	RAN1013
	26	BUTTON	AAD7052
	27	BUTTON	RAC1859
	28	BONNET	ANE7010
	29	TUNER ASSEMBLY	AWZ7272
	30	POWER ASSEMBLY	AWZ7275
	31	OUTLET ASSEMBLY	AWZ7279
	32	DISPLAY ASSEMBLY	AWP7001
	33	4 SERIAL F.E. MODULE ASSY	AXQ1004
	34	OPE. INSTRUCTIONS (English/French/German/Italian/ Swedish/Dutch/Spanish/ Portguese)	ARE7015
	35	PLUG CORD	ADE−052
	36	CORD WITH PLUG	ADE−085
	37	FM ANTENNA	ADH1005
	38	LOOP ANTENNA	ATB1011
	39	F.PAD	AHA7010
	40	R.PAD(PS)	AHA7011
	41	PACKING CASE	AHD7055
	42	PACKING SHEET	AHG1093
	43	FLEXIBLE CABLE	ADD1114



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10
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30
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33
11
5
HEWZI TYPE ONLY
Ferrite core ATX7001
13
17
HEWZI ONLY
17
17
* HE, HB : ABA1006
HEWZI : ABA1047
17
17
17
HEWZI ONLY
17
7
43
14
14
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32
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12
16
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16
1
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23
26
21
2
15
25
6
8
22
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22
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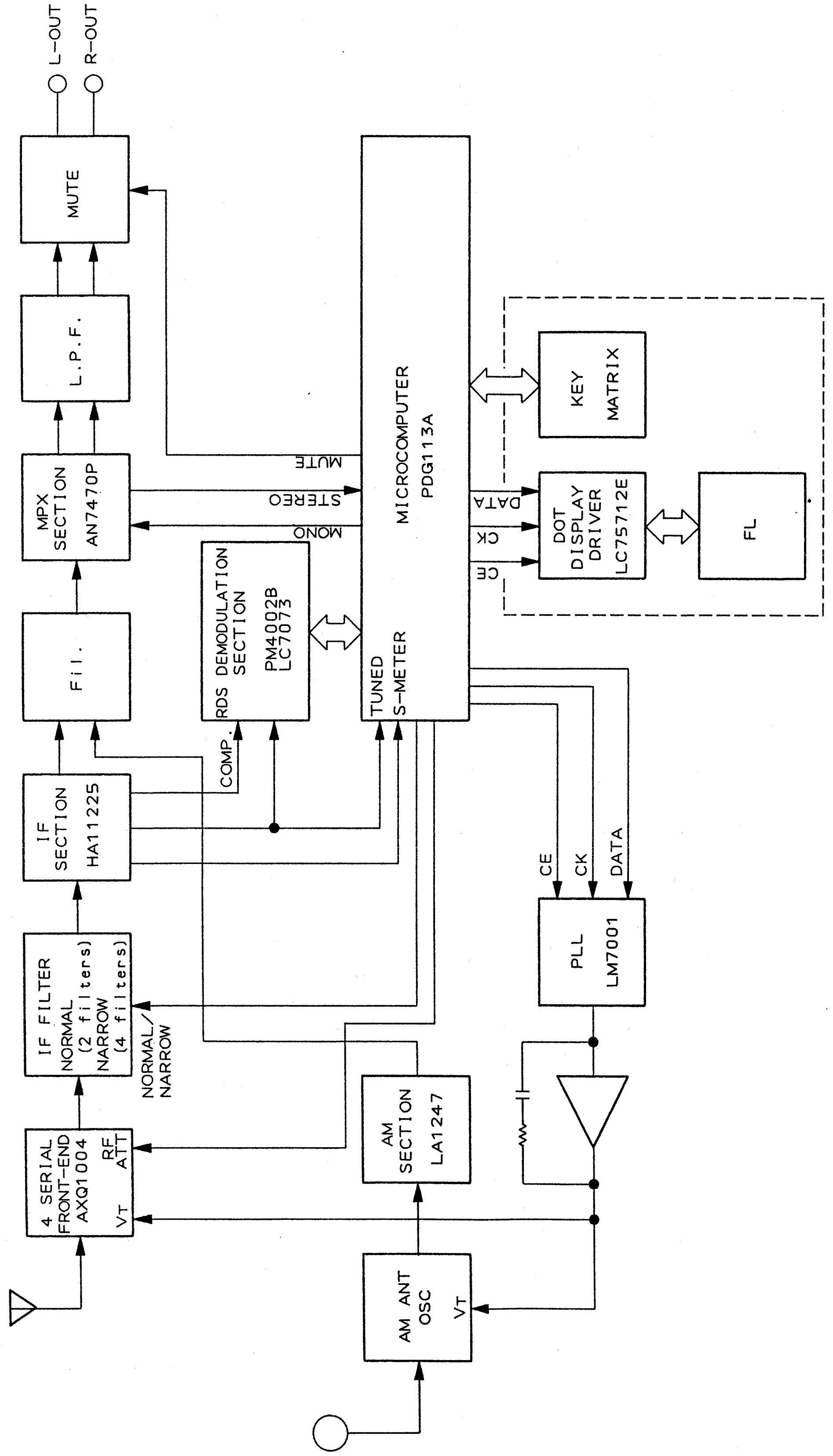
17
HEWZI ONLY
PLATE ANK1120
21
3
17

NOTE: Screws adjacent to ▼ mark on product are used for disassembly.

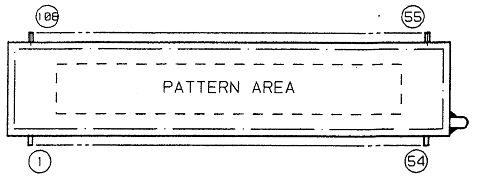
2. BLOCK DIAGRAM


L-OUT
R-OUT
MUTE
L.P.F.
MPX SECTION AN7470P
Fil.
IF SECTION HA11225
IF FILTER NORMAL (2 filters) NARROW (4 filters)
NORMAL/NARROW
4 SERIAL FRONT-END AXQ1004
RF ATT
VT
RDS DEMODULATION SECTION PM4002B LC7073
COMP.
MICROCOMPUTER PDG113A
TUNED
S-METER
MUTE
STEREO
MONO
DATA
CK
CE
KEY MATRIX
DOT DISPLAY DRIVER LC75712E
FL
CE
CK
DATA
PLL LM7001
AM SECTION LA1247
AM ANT OSC
VT

3. FL INFORMATION

■ AAV7008 (V901)

PIN LOCATION


108
55
PATTERN AREA
1
54

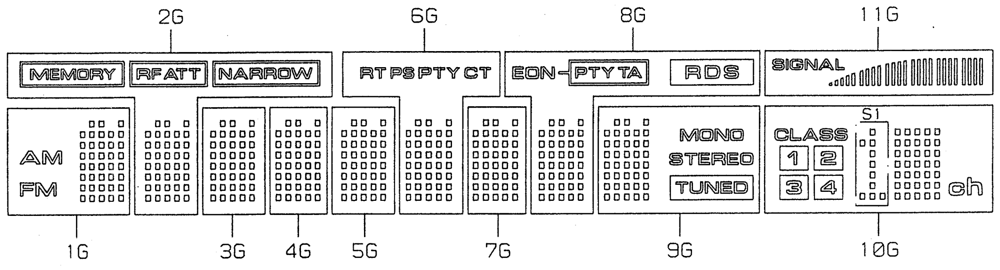
PIN CONNECTION

PIN NO.	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
CONNECTION	F1	F1	NP	NP	P42	P41	P40	P39	P38	P37	P36	P35	P34	P33	P32	P31	P30	P29	P28	P27	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	IC	P13	P14	P15	P16	P17	P23	P24	P25	P26	P18	P19	P20	P21	P22	NP	NP	F2	F2

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
CONNECTION	F1	F1	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	NC	NC	NC	NC	NC	NC	NC	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	9G	10G	NC	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	11G	NP	NP	F2	F2

NOTE
1) F1,F2 --- Filament
2) NP ------ No pin
3) NX ------ No extend pin
4) DL ------ Datum Line
5) NC ------ No connection
6) 1G~11G --- Grid
7) IC ------ Internal connection
8) Pin50 and pin73 are connected inside.

GRID ASSIGNMENT


2G
6G
8G
11G
MEMORY
RF ATT
NARROW
RT PS PTY CT
EON-
PTY TA
RDS
SIGNAL
AM
FM
MONO
STEREO
TUNED
CLASS
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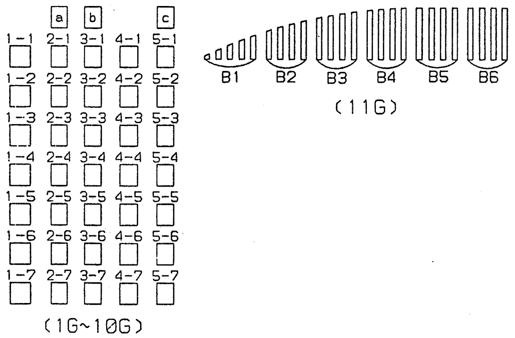
3
4
S1
ch
1G
3G
4G
5G
7G
9G
10G


a
b
c
1-1
2-1
3-1
4-1
5-1
1-2
2-2
3-2
4-2
5-2
1-3
2-3
3-3
4-3
5-3
1-4
2-4
3-4
4-4
5-4
1-5
2-5
3-5
4-5
5-5
1-6
2-6
3-6
4-6
5-6
1-7
2-7
3-7
4-7
5-7
(1G~10G)
B1
B2
B3
B4
B5
B6
(11G)

ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G
P 1	-	-	-	-	-	CT	-	RDS	-	ch	B6
P 2	-	NARROW	-	-	-	PTY	-	TA	TUNED	S1	B5
P 3	FM	RF ATT	-	-	-	PS	-	PTY	STEREO	4	B4
P 4	AM	MEMORY	-	-	-	RT	-	EON-☐	MONO	3	B3
P 5	c	c	c	c	c	c	c	c	c	2	B2
P 6	b	b	b	b	b	b	b	b	b	1	B1
P 7	a	a	a	a	a	a	a	a	a	CLASS	SIGNAL
P 8	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	-
P 9	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	-
P10	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	-
P11	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	-
P12	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	-
P13	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	-
P14	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	-
P15	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	-
P16	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	-
P17	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	-
P18	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	-
P19	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	-
P20	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	-
P21	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	-
P22	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	-
P23	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	-
P24	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	-
P25	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	-
P26	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	-
P27	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	-
P28	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	-
P29	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	-
P30	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	-
P31	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	-
P32	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	-
P33	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	-
P34	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	-
P35	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	-
P36	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	-
P37	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	-
P38	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	-
P39	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	-
P40	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	-
P41	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	-
P42	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	-

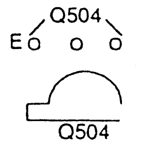
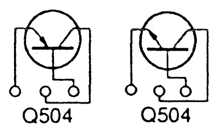
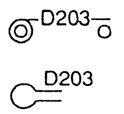
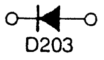
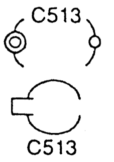
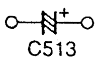
4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS (Type 3A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   mV : Signal voltage at FM 1kHz, 100% MOD.
   ▭ or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ➋ : Adjusting point.
   - ◄ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH—☐ ON THE SCHEMATIC DIAGRAM:**
   - SCH—☐ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):
   S901: POWER (STANDBY/ON)
   S902: RF Att
   S905: Class
   S906: FM/AM
   S911: Memory
   S916: Active mode
   S917: IF Band
   S921: EON
   S922: Mono
   S924: Freq/Station
   S925: Up
   S926: Down

NOTE FOR PCB DIAGRAMS:

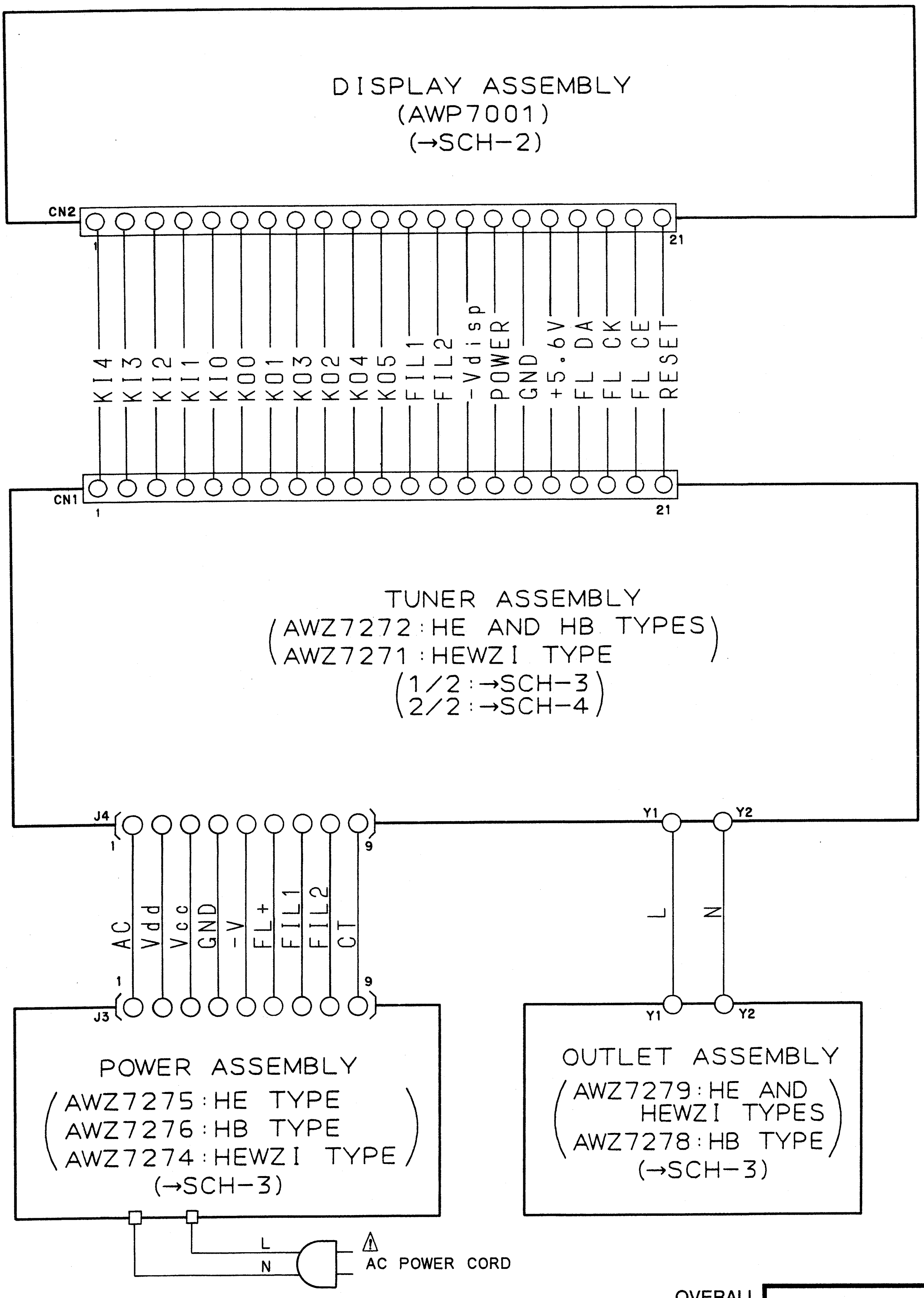
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

3. The transistor terminal marked with E or⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

4.1 OVERALL WIRING DIAGRAM

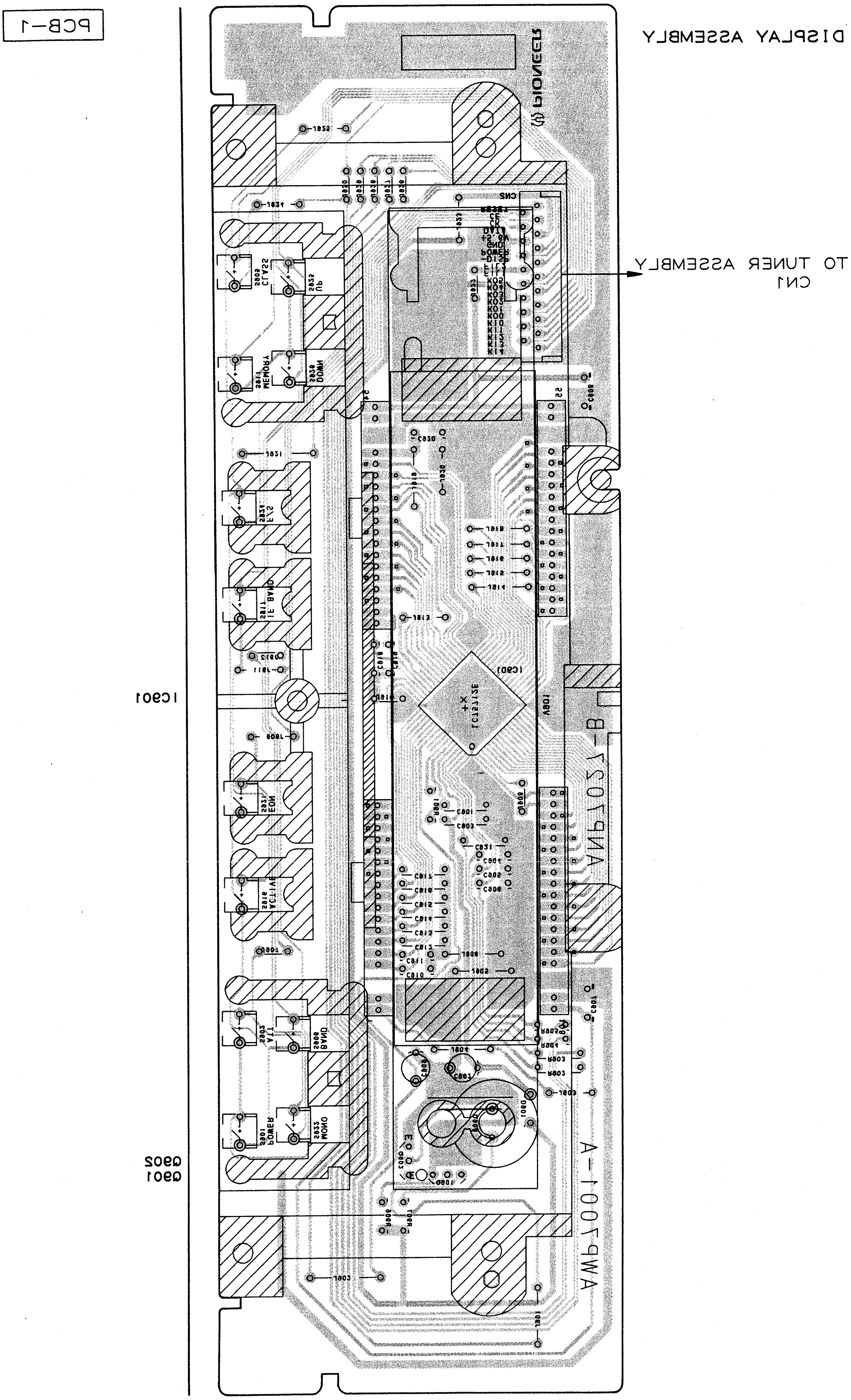
SCH-1


DISPLAY ASSEMBLY
(AWP7001)
(→SCH-2)
CN2
1
21
KI4
KI3
KI2
KI1
KI0
KO0
KO1
KO3
KO2
KO4
KO5
FIL1
FIL2
-Vdisp
POWER
GND
+5.6V
FL DA
FL CK
FL CE
RESET
CN1
1
21
TUNER ASSEMBLY
(AWZ7272:HE AND HB TYPES
AWZ7271:HEWZI TYPE)
(1/2:→SCH-3
2/2:→SCH-4)
J4
1
9
AC
Vdd
Vcc
GND
-V
FL+
FIL1
FIL2
CT
1
9
J3
Y1
Y2
L
N
Y1
Y2
POWER ASSEMBLY
(AWZ7275:HE TYPE
AWZ7276:HB TYPE
AWZ7274:HEWZI TYPE)
(→SCH-3)
OUTLET ASSEMBLY
(AWZ7279:HE AND
HEWZI TYPES
AWZ7278:HB TYPE)
(→SCH-3)
L
N
⚠
AC POWER CORD

OVERALL **SCH-1**

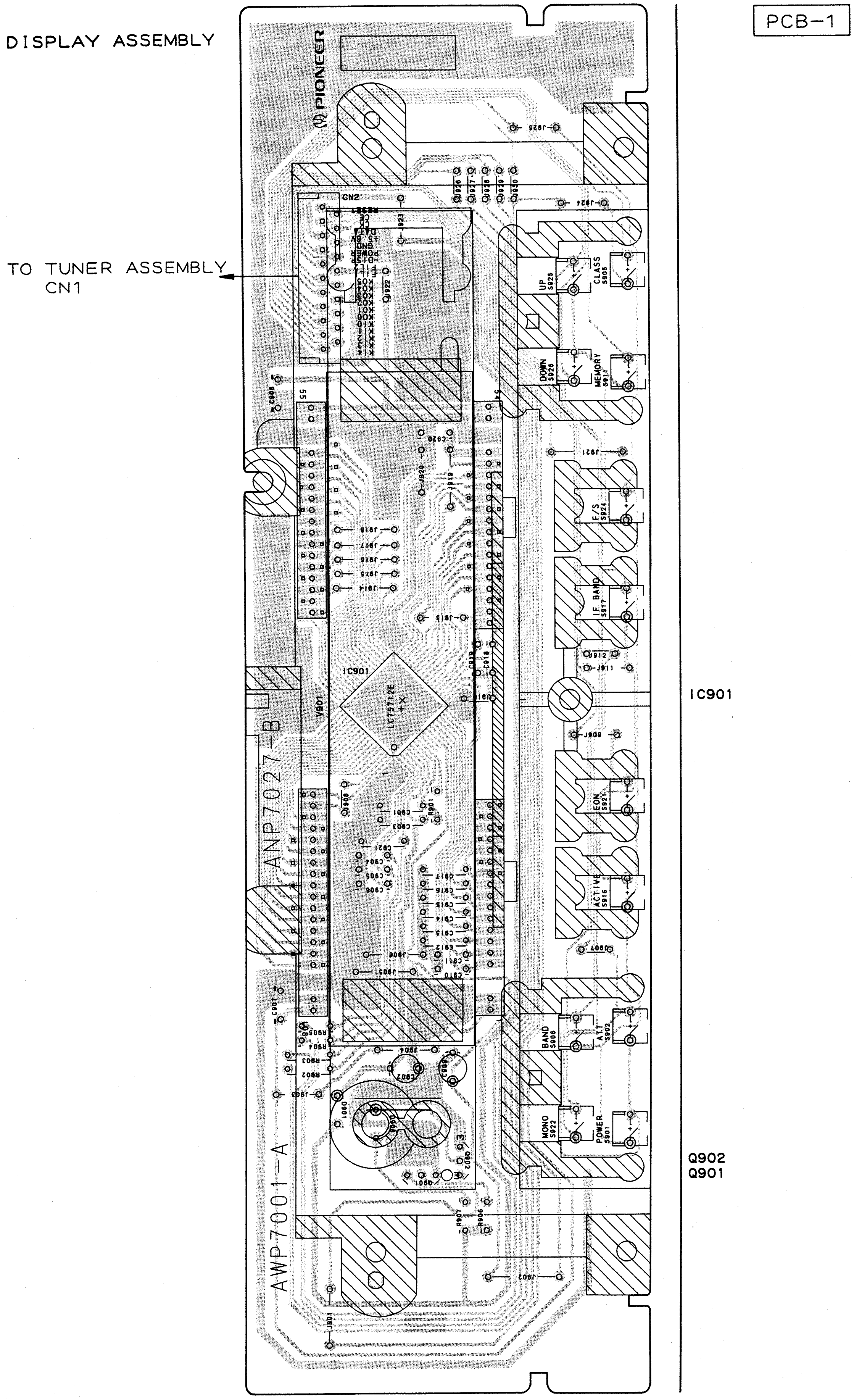
4.2 DISPLAY ASSEMBLY

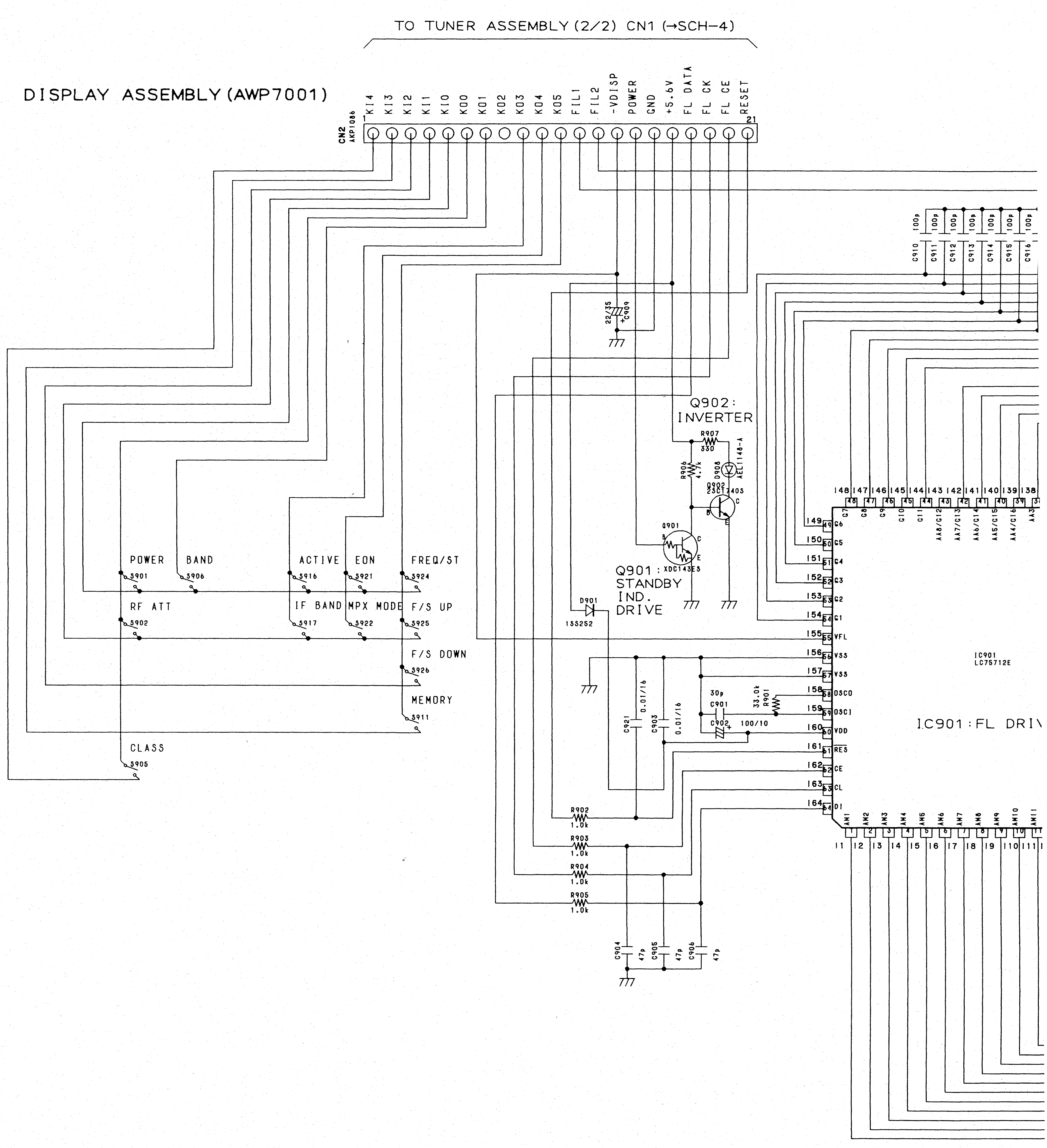
- This diagram is viewed from the foil side.


PCB-1
DISPLAY ASSEMBLY
TO TUNER ASSEMBLY
CN1
IC901
Q902
Q901
PIONEER
CN2
IC901
TC15112SE
S2809 CLASS
S2823 UP
S2810 MEMORY
S2826 DOWN
S2831 F.S
S2811 IF BAND
S2812 EON
S2816 ACTIVE
S2803 ATT
S2806 BAND
S2801 POWER
S2833 MONO
ANP7021-B
AWP7001-A

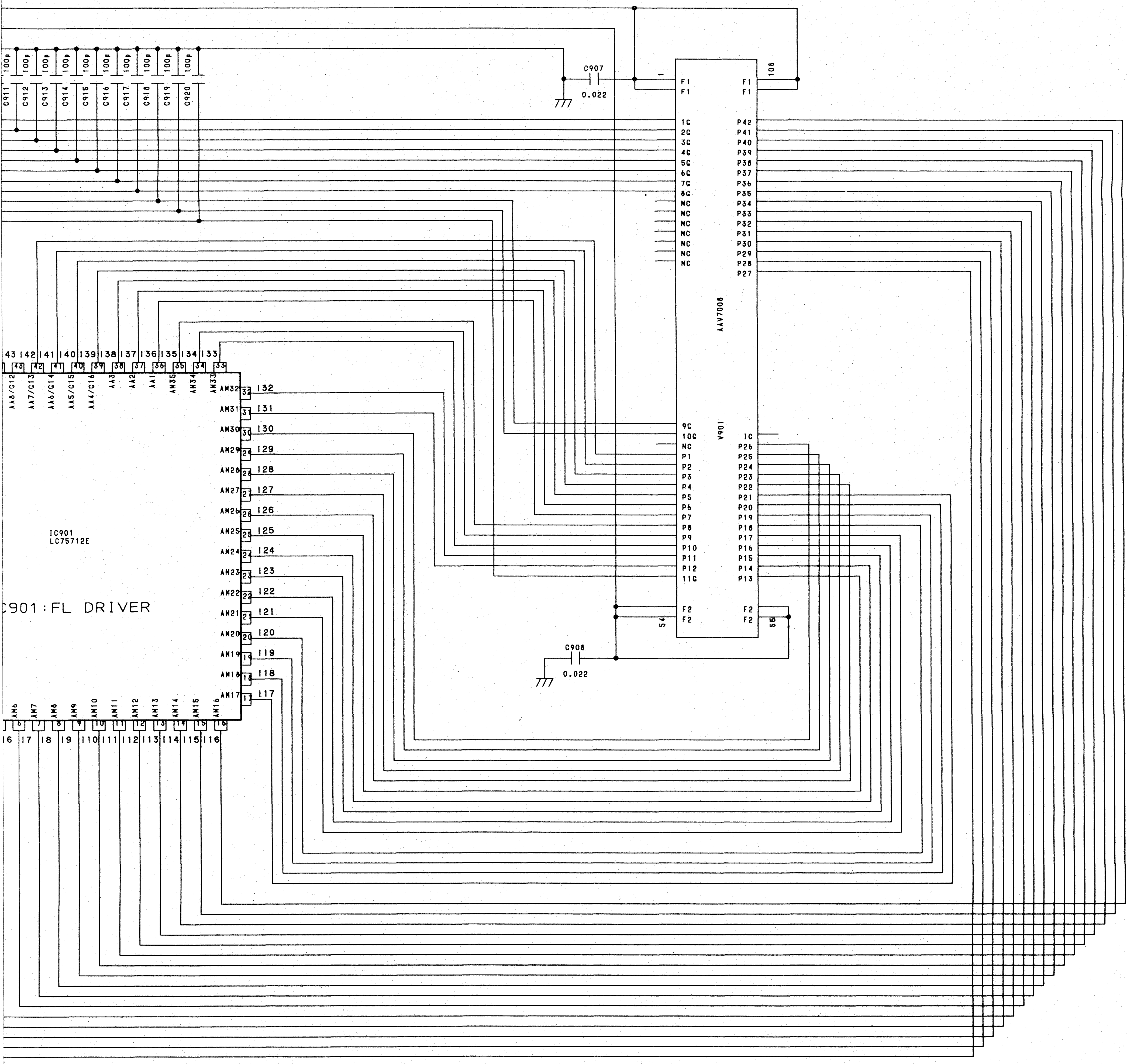
4.2 DISPLAY ASSEMBLY

- This diagram is viewed from the mounted parts side.


PCB–1
DISPLAY ASSEMBLY
TO TUNER ASSEMBLY CN1
IC901
Q902
Q901
PIONEER
CN2
RESET
CE
CLK
DATA
+5.6V
GND
POWER
DIG
FIL
FIL
KO5
KO4
KO3
KO2
KO1
KO0
KI0
KI1
KI2
KI3
KI4
IC901
LC75712E
V901
ANP7027–B
AWP7001–A
UP S925
CLASS S905
DOWN S926
MEMORY S911
F/S S924
IF BAND S917
EON S921
ACTIVE S916
BAND S906
ATT S902
MONO S922
POWER S901
J925
J924
J923
J922
J921
J920
J919
J918
J917
J916
J915
J914
J913
J912
J911
J909
J907
J906
J905
J904
J903
J902
J901
C920
C919
C918
C917
C916
C915
C914
C913
C912
C911
C910
C909
C908
C907
C906
C905
C904
C903
C902
C901
C921
R901
R902
R903
R904
R905
R906
R907
Q901
Q902
D901
D936
D927
D928
D929
D930
55
54
1
2
3
A
B
C
D


DISPLAY ASSEMBLY (AWP7001)
TO TUNER ASSEMBLY (2/2) CN1 (→SCH-4)
CN2
AKP1086
KI4
KI3
KI2
KI1
KI0
KO0
KO1
KO2
KO3
KO4
KO5
FIL1
FIL2
-VDISP
POWER
GND
+5.6V
FL DATA
FL CK
FL CE
RESET
1
21
POWER
S901
BAND
S906
ACTIVE
S916
EON
S921
FREQ/ST
S924
RF ATT
S902
IF BAND
S917
MPX MODE
S922
F/S UP
S925
F/S DOWN
S926
MEMORY
S911
CLASS
S905
C909
22/35
Q902:
INVERTER
R907
330
R906
4.7k
D908
AEL1148-A
Q902
2SC1740S
Q901
Q901 : XDC143ES
STANDBY
IND.
DRIVE
D901
1SS252
C921
0.01/16
C903
0.01/16
C901
30p
R901
33.0k
C902
100/10
R902
1.0k
R903
1.0k
R904
1.0k
R905
1.0k
C904
47p
C905
47p
C906
47p
C910
C911
C912
C913
C914
C915
C916
100p
IC901
LC75712E
IC901 : FL DRI
VFL
VSS
OSCO
OSCI
VDD
RES
CE
CL
DI
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
AA8/C12
AA7/C13
AA6/C14
AA5/C15
AA4/C16
AA3
AM1
AM2
AM3
AM4
AM5
AM6
AM7
AM8
AM9
AM10
AM11

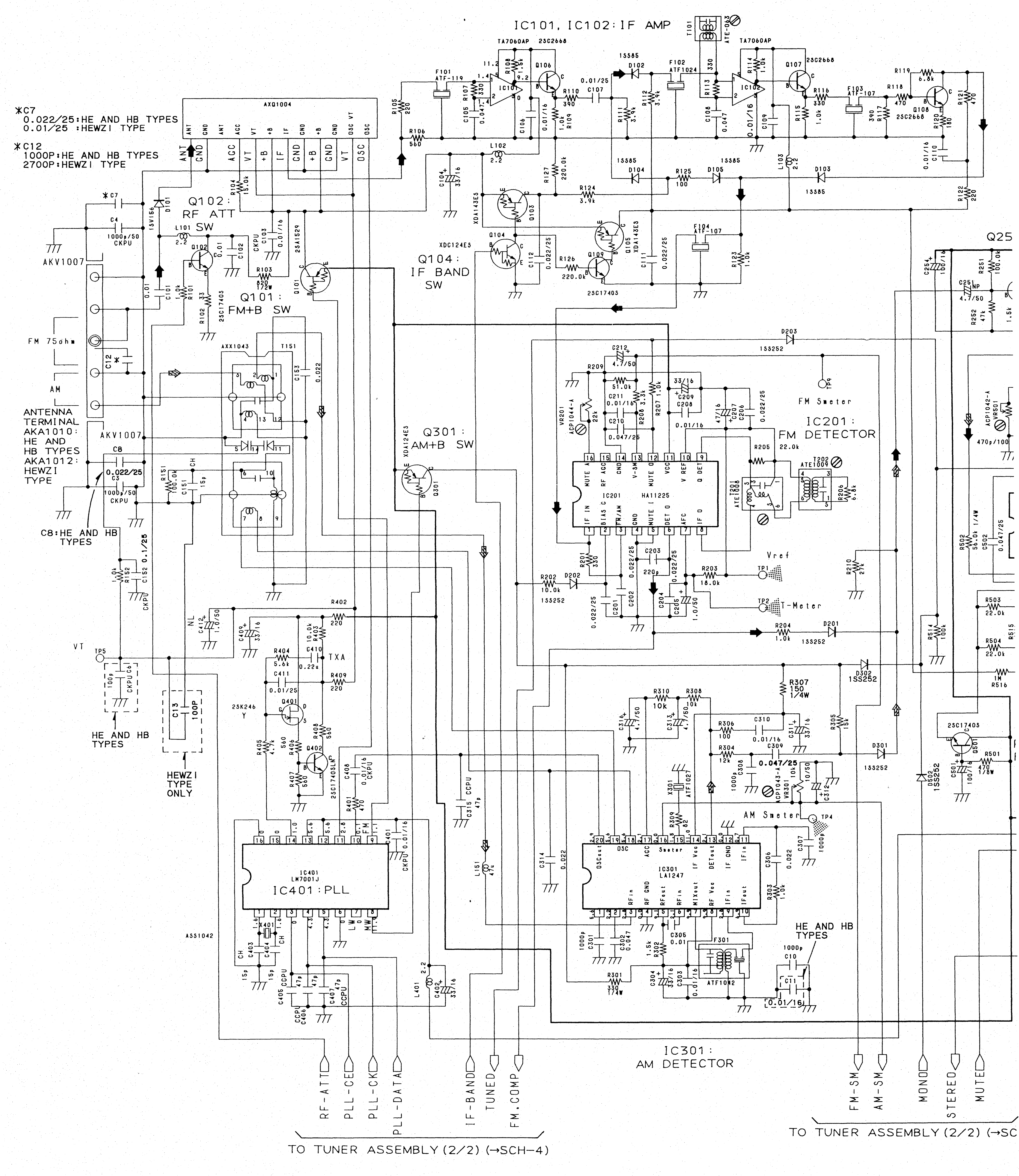
SCH-2


IC901 : FL DRIVER
IC901
LC75712E
AA8/G12
AA7/G13
AA6/G14
AA5/G15
AA4/G16
AA3
AA2
AA1
AM35
AM34
AM33
AM32
AM31
AM30
AM29
AM28
AM27
AM26
AM25
AM24
AM23
AM22
AM21
AM20
AM19
AM18
AM17
AM6
AM7
AM8
AM9
AM10
AM11
AM12
AM13
AM14
AM15
AM16
C911
C912
C913
C914
C915
C916
C917
C918
C919
C920
100p
C907
0.022
C908
0.022
V901
AAV7008
F1
F2
1G
2G
3G
4G
5G
6G
7G
8G
9G
10G
11G
1C
NC
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
P21
P22
P23
P24
P25
P26
P27
P28
P29
P30
P31
P32
P33
P34
P35
P36
P37
P38
P39
P40
P41
P42
1
54
55
108

DISPLAY ASSY **SCH-2**

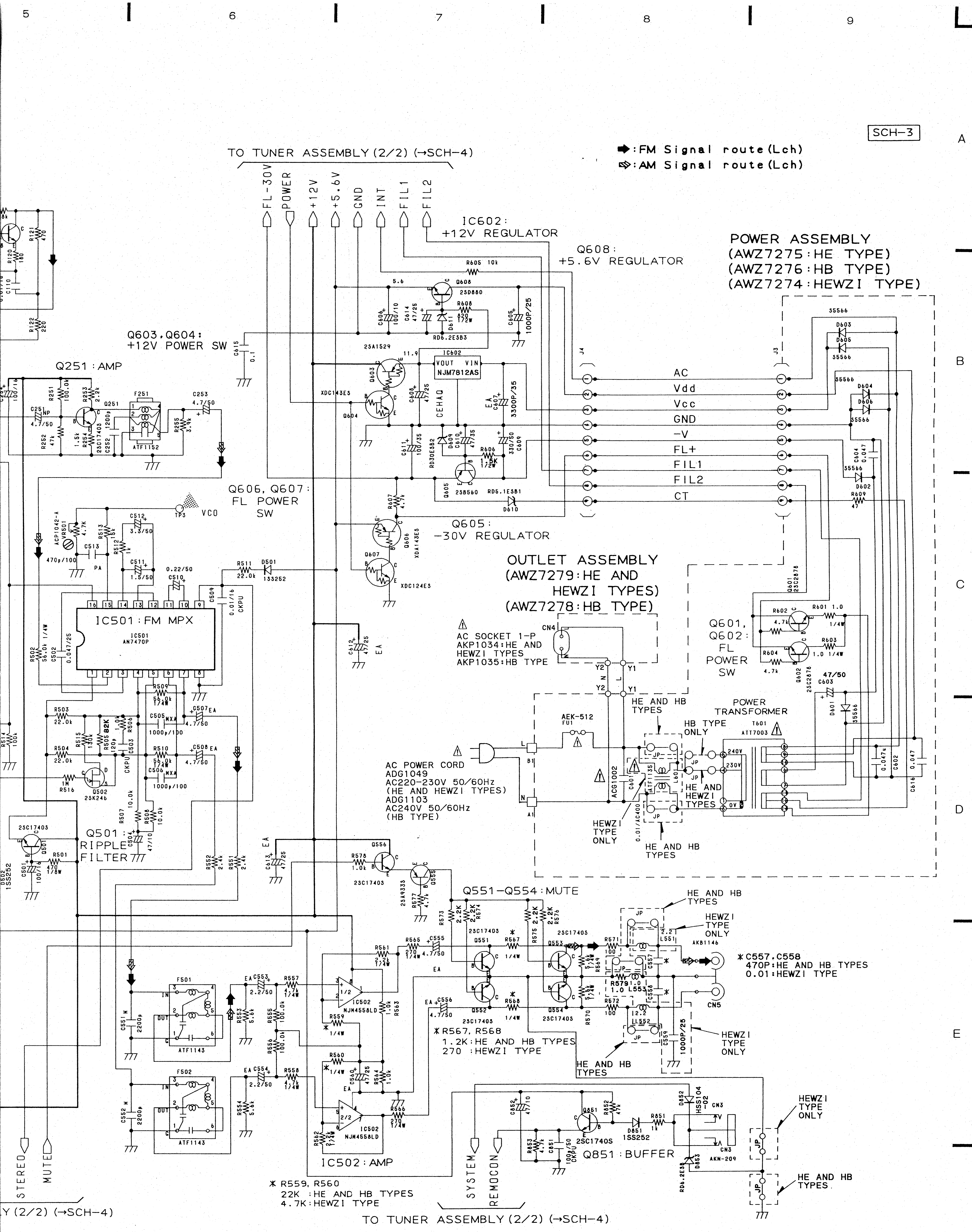
4.3 TUNER (1/2), POWER, OUTLET ASSEMBLIES

TUNER ASSEMBLY (1/2) (AWZ7272:HE AND HB TYPES)
(AWZ7271:HEWZI TYPE)


IC101, IC102: IF AMP
*C7
0.022/25:HE AND HB TYPES
0.01/25 :HEWZI TYPE
*C12
1000P:HE AND HB TYPES
2700P:HEWZI TYPE
AXQ1004
ANT
GND
ACC
VT
+B
IF
OSC
Q102: RF ATT SW
Q101: FM+B SW
Q104: IF BAND SW
Q301: AM+B SW
AKV1007
FM 75ohm
AM
ANTENNA TERMINAL
AKA1010: HE AND HB TYPES
AKA1012: HEWZI TYPE
C8:HE AND HB TYPES
AXX1043
T151
VT
TP5
HE AND HB TYPES
HEWZI TYPE ONLY
NL
TXA
IC401: PLL
IC401 LM7001J
IC201 HA11225
IC201: FM DETECTOR
FM Smeter
Vref
T-Meter
IC301 LA1247
IC301: AM DETECTOR
AM Smeter
HE AND HB TYPES
Q25
RF-ATT
PLL-CE
PLL-CK
PLL-DATA
IF-BAND
TUNED
FM.COMP
FM-SM
AM-SM
MONO
STEREO
MUTE
TO TUNER ASSEMBLY (2/2) (→SCH-4)
TO TUNER ASSEMBLY (2/2) (→SC

SCH-3

TUNER ASSY (1/2),
POWER ASSY,
OUTLET ASSY



SCH-3
➡:FM Signal route(Lch)
⇨:AM Signal route(Lch)
TO TUNER ASSEMBLY (2/2) (→SCH-4)
FL-30V
POWER
+12V
+5.6V
GND
INT
FIL1
FIL2
IC602:
+12V REGULATOR
Q608:
+5.6V REGULATOR
POWER ASSEMBLY
(AWZ7275:HE TYPE)
(AWZ7276:HB TYPE)
(AWZ7274:HEWZI TYPE)
Q603,Q604:
+12V POWER SW
Q251:AMP
NJM7812AS
AC
Vdd
Vcc
GND
-V
FL+
FIL1
FIL2
CT
J4
J3
Q606,Q607:
FL POWER
SW
VCO
Q605:
-30V REGULATOR
IC501:FM MPX
AN7470P
OUTLET ASSEMBLY
(AWZ7279:HE AND
HEWZI TYPES)
(AWZ7278:HB TYPE)
AC SOCKET 1-P
AKP1034:HE AND
HEWZI TYPES
AKP1035:HB TYPE
Q601,
Q602:
FL
POWER
SW
AEK-512
HE AND HB
TYPES
POWER
TRANSFORMER
T601
ATT7003
HB TYPE
ONLY
AC POWER CORD
ADG1049
AC220-230V 50/60Hz
(HE AND HEWZI TYPES)
ADG1103
AC240V 50/60Hz
(HB TYPE)
ACG1002
HE AND
HEWZI
TYPES
HEWZI
TYPE
ONLY
HE AND HB
TYPES
Q501:
RIPPLE
FILTER
Q551-Q554:MUTE
HE AND HB
TYPES
HEWZI
TYPE
ONLY
AKB1146
*C557,C558
470P:HE AND HB TYPES
0.01:HEWZI TYPE
CN5
*R567,R568
1.2K:HE AND HB TYPES
270 :HEWZI TYPE
HE AND HB
TYPES
HEWZI
TYPE
ONLY
IC502:AMP
NJM4558LD
FS01
FS02
ATF1143
Q851:BUFFER
HSS104
-02
CN3
AKN-209
HEWZI
TYPE
ONLY
HE AND HB
TYPES
STEREO
MUTE
Y (2/2) (→SCH-4)
*R559,R560
22K :HE AND HB TYPES
4.7K:HEWZI TYPE
SYSTEM
REMOCON
TO TUNER ASSEMBLY (2/2) (→SCH-4)
5
6
7
8
9
A
B
C
D
E
F

TUNER ASSY (1/2),
POWER ASSY,
OUTLET ASSY

SCH-3

4204

Line Voltage Selection

Line Voltage can be changed by the following modification:
1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the position of the jumper-lines Ⓐ follows.

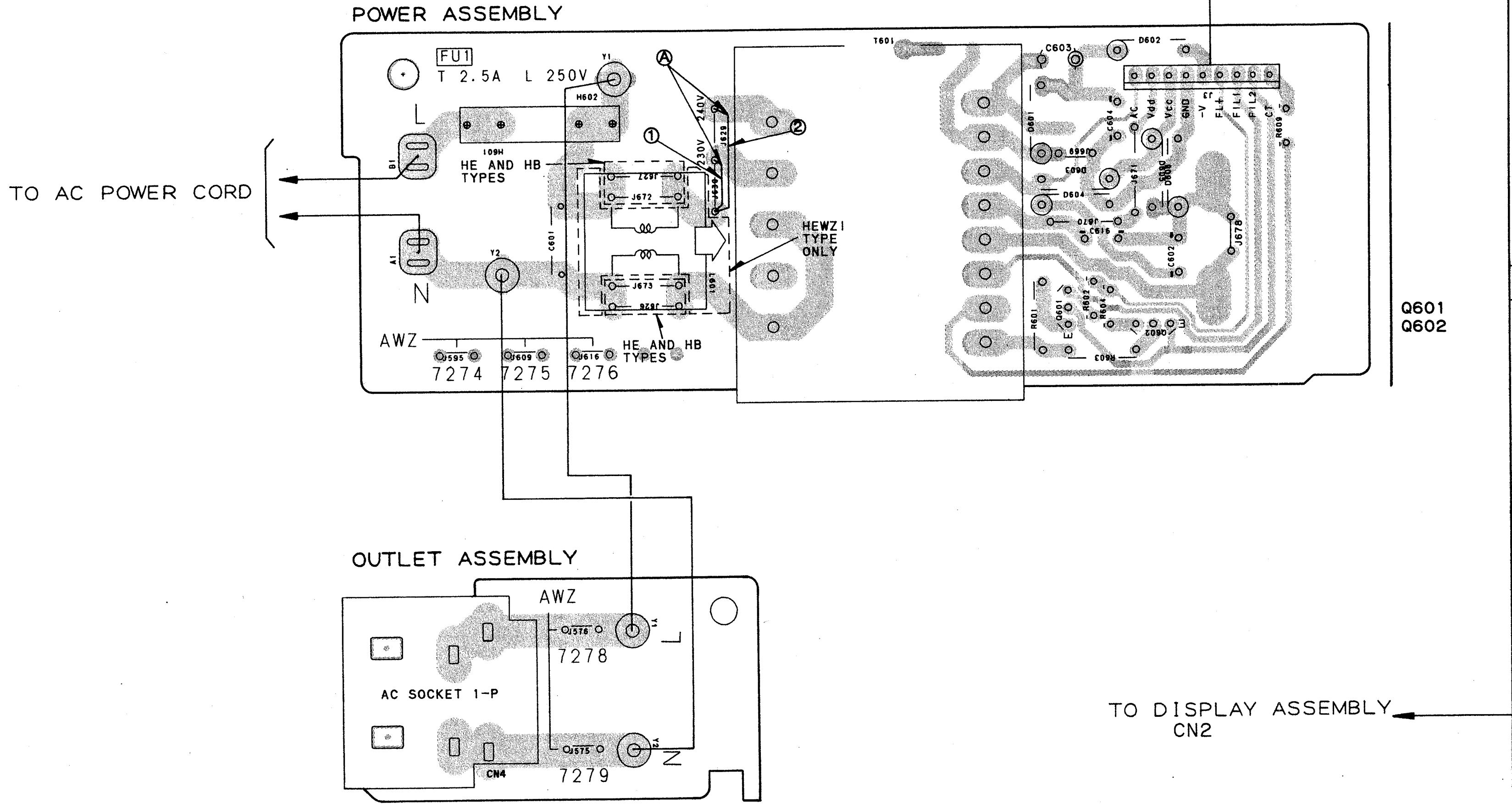
Voltage	jumper—line Ⓐ position
220V—230V	①
240V	②

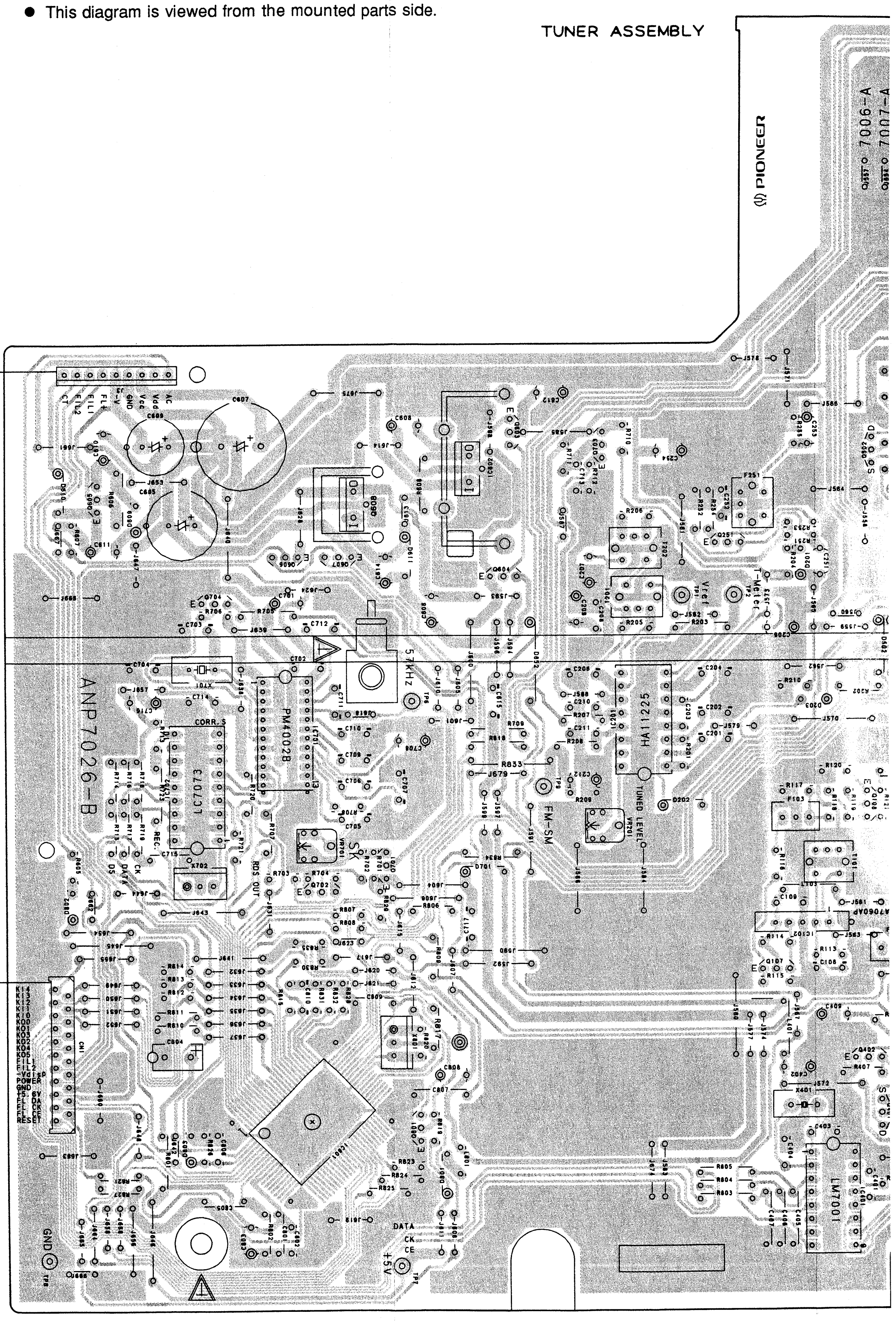
NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual. jumper-lines on the PCB may have to be removed. Forgetting this check-up will cause a serious damage.

4. Stick a line voltage label on the rear panel.

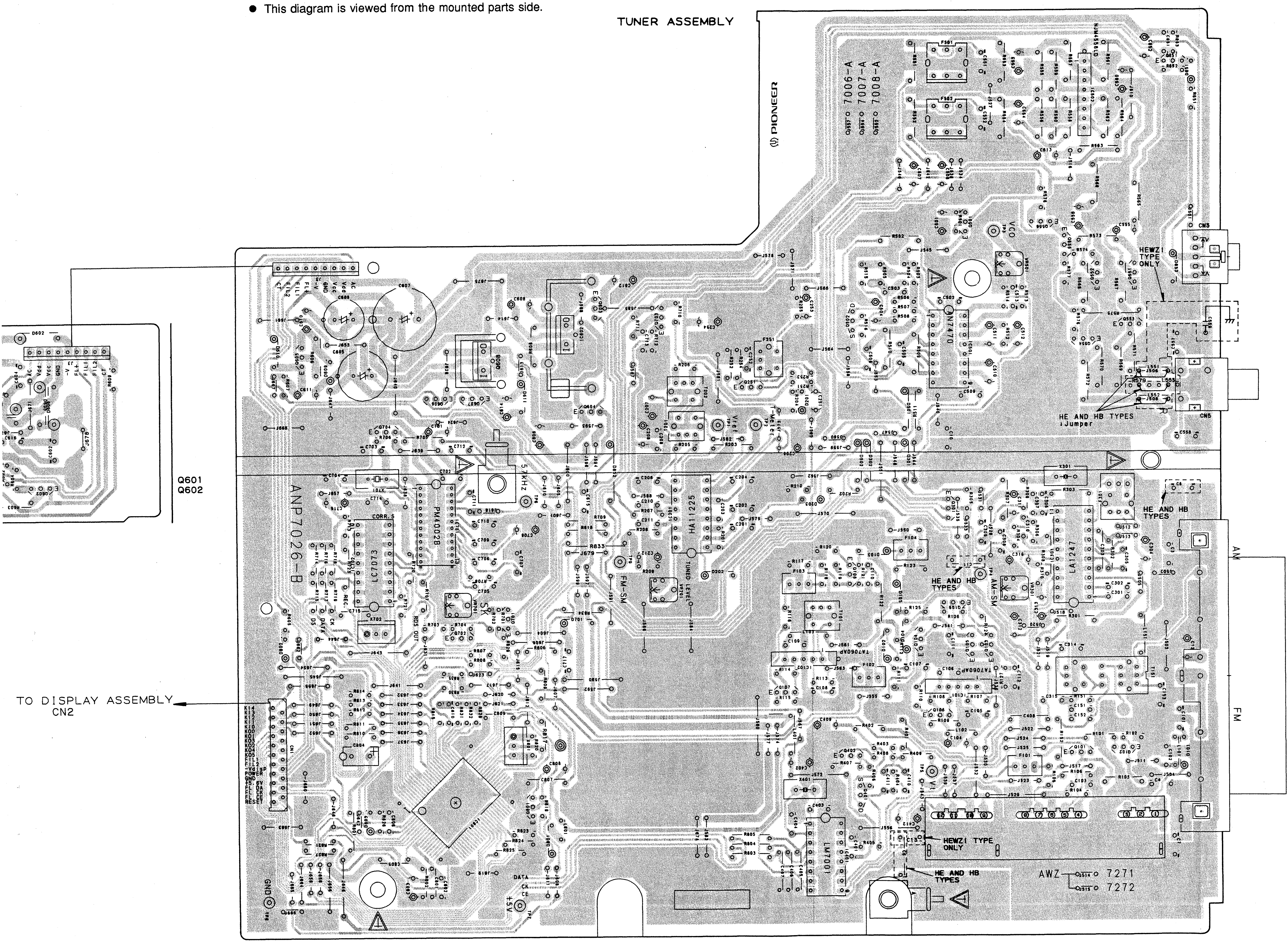
Part No.	Description
AAX—193	220V label
AAX—192	240V label

- This diagram is viewed from the mounted parts side.


POWER ASSEMBLY
FU1
T 2.5A L 250V
Y1
H602
Ⓐ
①
②
240V
230V
L
N
B1
A1
Y2
109H
HE AND HB TYPES
HEWZI TYPE ONLY
J672
J673
C601
T601
C603
D602
AC
Vdd
Vcc
GND
FIL1
FIL2
CT
AWZ
7274 7275 7276
HE AND HB TYPES
Q601
Q602
TO AC POWER CORD
OUTLET ASSEMBLY
AWZ
7278
7279
AC SOCKET 1-P
CN4
TO DISPLAY ASSEMBLY CN2


TUNER ASSEMBLY
PIONEER
7006-A
7007-A
ANP7026-B
PM4002B
LC7073
HA11225
LM7001
CORR.S
57kHz
RDS OUT
FM-SM
TUNED LEVEL
GND
+5V
DATA
CK
CE

- This diagram is viewed from the mounted parts side.


TUNER ASSEMBLY
PIONEER
7006-A
7007-A
7008-A
VCO
HEWZI TYPE ONLY
CN5
HE AND HB TYPES : Jumper
ANP7026-B
PM4002B
LC7073
CORR.S
57kHz
HA11225
FM-SM
TUNED LEVEL
RDS OUT
HE AND HB TYPES
LA1247
AM-SM
TA7060AP
AM
FM
LM7001
HEWZI TYPE ONLY
HE AND HB TYPES
AWZ 7271
7272
DATA
CK
CE
+5V
GND
Q601
Q602
TO DISPLAY ASSEMBLY
CN2

PCB-2

A
Q851
IC502

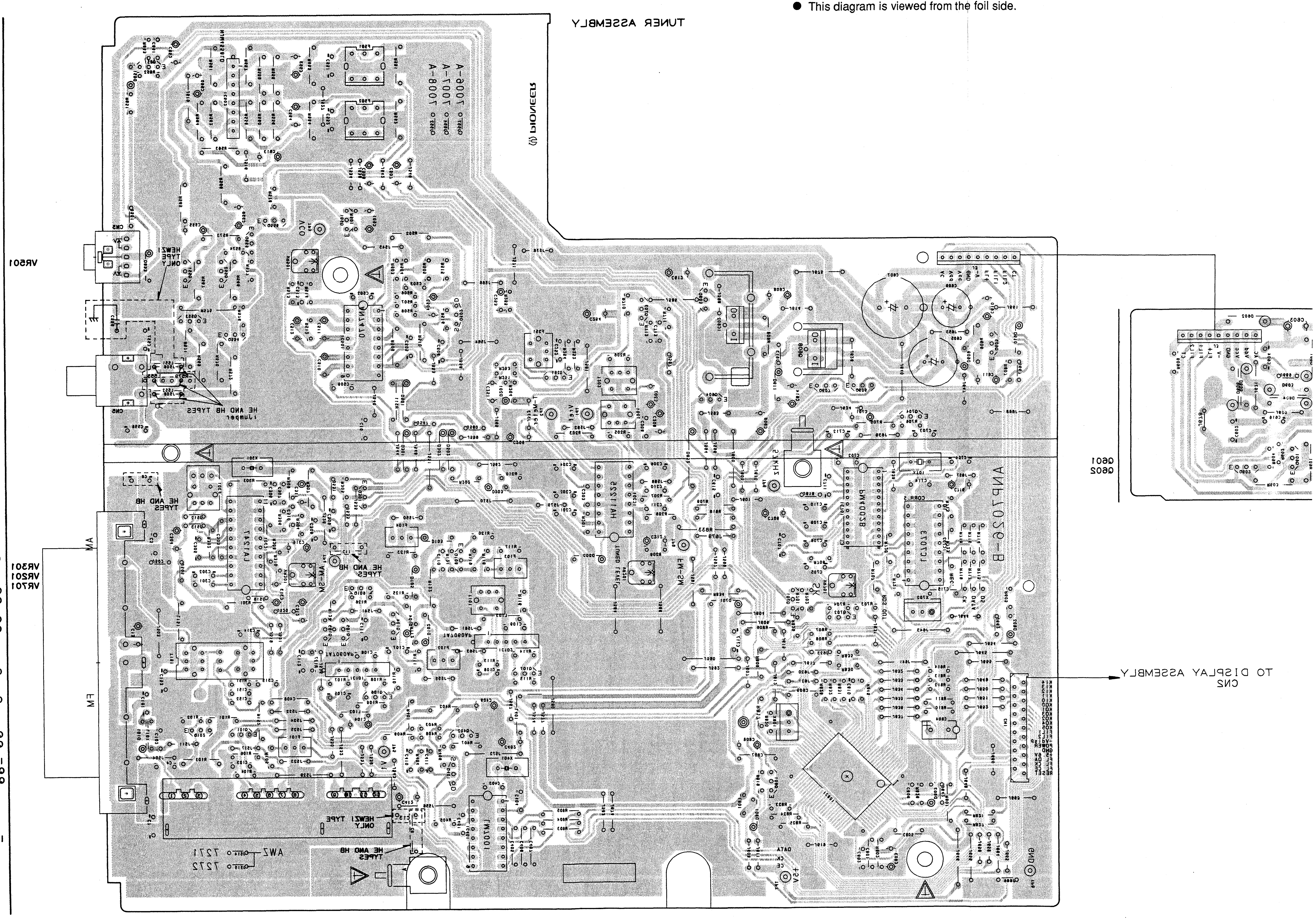
B
Q501
Q556
Q555
VR501 Q552
Q551
Q603
Q703
Q502 Q553
IC602 Q554
Q605 IC501
Q608
Q251
Q606 Q607
Q604
Q704

C
IC701
IC201
Q301
IC301
IC702
Q108
VR301
VR201
VR701
Q109
Q701
Q702 Q104
Q105 Q103
IC102
Q107 IC101
Q106

D
Q101 Q102
Q402
IC801
Q401
Q801
IC401

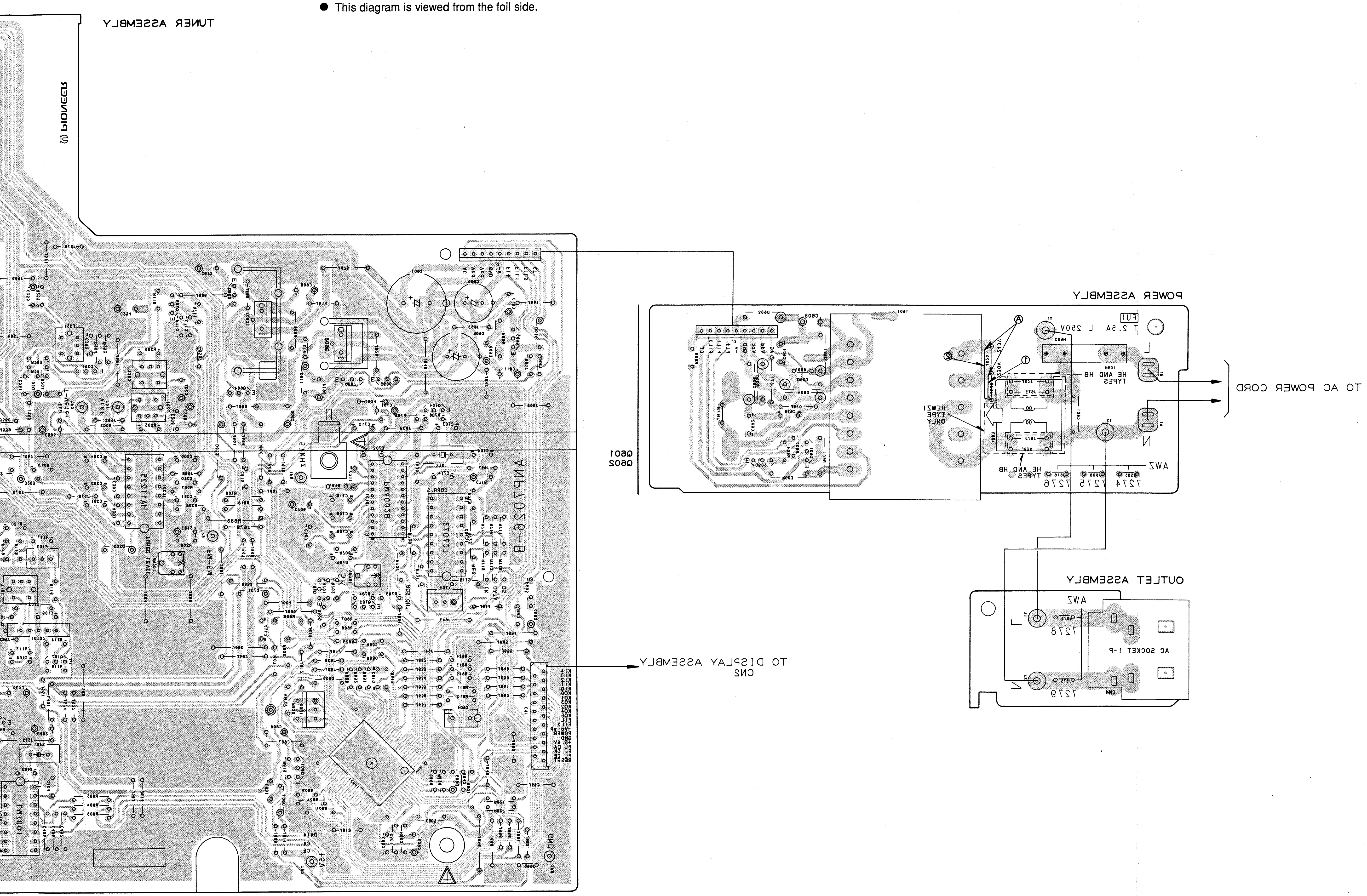
PCB-2

- This diagram is viewed from the foil side.


TUNER ASSEMBLY
TO DISPLAY ASSEMBLY CN2
PIONEER
ANP2026-B
Q851
IC502
Q501
Q556
Q555
Q552
Q551
VR501
Q603
Q703
Q502
Q553
IC602
Q554
Q605
IC501
Q608
Q251
Q606
Q607
Q604
Q704
IC701
IC201
Q301
IC301
IC702
Q108
VR301
VR201
VR701
Q109
Q701
Q702
Q104
Q105
Q103
IC102
Q107
IC101
Q106
Q101
Q102
Q402
IC801
Q401
Q801
IC401
Q601
Q602
AM
FM
CN3
CN5
HEWZ1 TYPE ONLY
HE AND HB TYPES
HE AND HB TYPES jumper
GND
+5V
DATA
CK

9
8
7
6
5
4
A
B
C
D

- This diagram is viewed from the foil side.


TUNER ASSEMBLY
PIONEER
POWER ASSEMBLY
OUTLET ASSEMBLY
TO AC POWER CORD
TO DISPLAY ASSEMBLY
CN2
ANP7026-B
T 2.5A L 250V
HE AND HB TYPES
HEWZ1 TYPE ONLY
AWZ
AC SOCKET 1-P
Q601
Q602
PM4002B
LA1265S
GND
DATA
CE
+5V
6
5
4
3
2
1
A
B
C
D

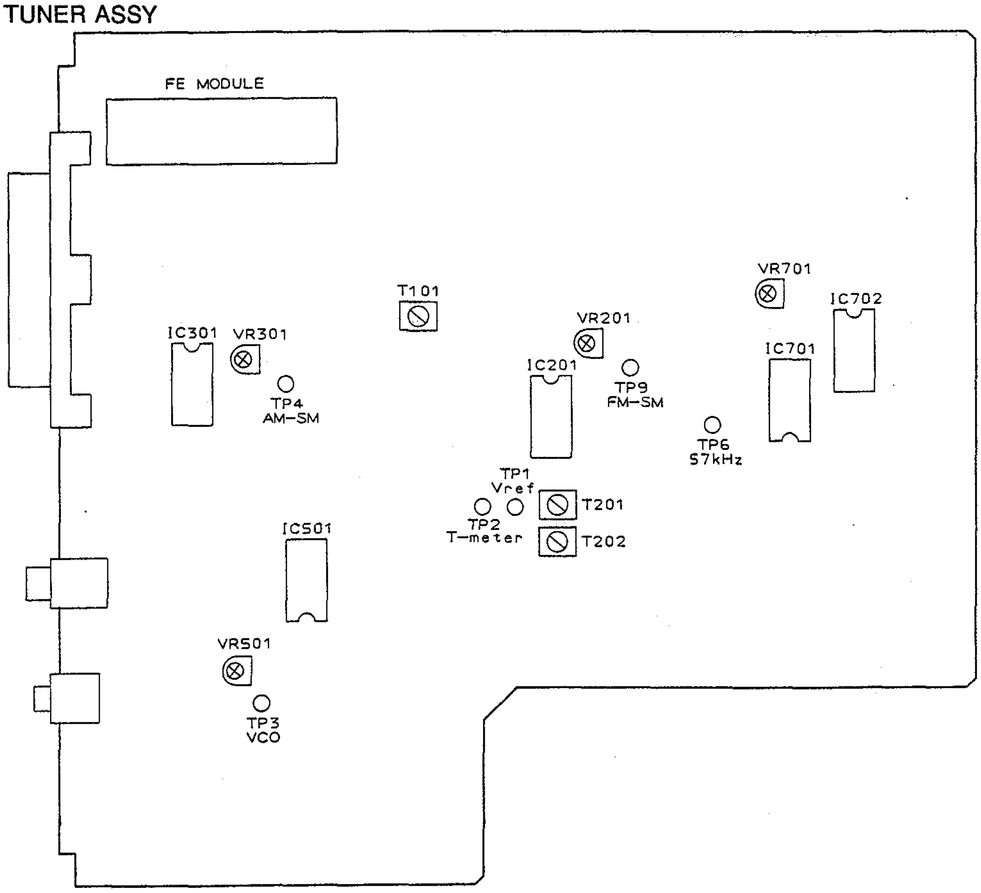

TUNER ASSY
FE MODULE
T101
VR701
IC702
VR201
IC301
VR301
IC701
IC201
TP9
FM–SM
TP4
AM–SM
TP6
57kHz
TP1
Vref
T201
TP2
T–meter
T202
IC501
VR501
TP3
VCO

Fig. 1 Adjustment Points

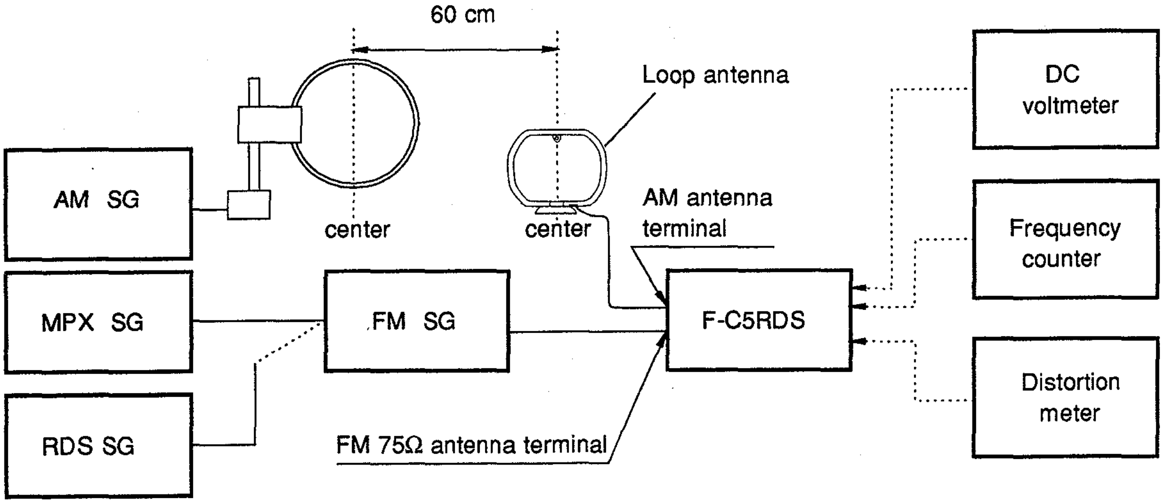

60 cm
Loop antenna
DC voltmeter
AM SG
center
center
AM antenna terminal
Frequency counter
MPX SG
FM SG
F-C5RDS
RDS SG
FM 75Ω antenna terminal
Distortion meter

Fig. 2 Connection Diagram

7. FOR HB AND HEWZI TYPES

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by " ◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

F-C5RDS/HB, HEWZI and F-C5RDS/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		F-C5RDS/HE	F-C5RDS/HB	F-C5RDS/HEWZI	
	TUNER assembly	AWE7007	AWE7008	AWE7006	
	TUNER assembly	AWZ7272	AWZ7272	AWZ7271	
	POWER assembly	AWZ7275	AWZ7276	AWZ7274	
	OUTLET assembly	AWZ7279	AWZ7278	AWZ7279	
⚠	AC power cord	ADG1049	ADG1103	ADG1049	
	Rear panel	ANC7095	ANC7096	ANC7094	
	Ferrite core	....	....	ATX7001	*
	Screw	....	....	ABA1047	*
	Operating instructions (English/German/French/Italian/ Swedish/Dutch/Spanish/Portuguese)	ARE7015	....	....	
	Operating instructions (English)	....	ARB7014	....	
	Operating instructions (German/Italian)	....	....	ARC7022	
	FM antenna	ADH1005	ADH1005	ADH1002	
	Plate (GND)	....	....	ANK1120	*

* : Refer to page4.

TUNER ASSEMBLY
AWZ7271 and AWZ7272 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7272	AWZ7271	
	R559,R560	RDR1/4PM223J	RDR1/4PM472J	
	R567,R568	RDR1/4PM122J	RDR1/4PM271J	
	R579	....	RD1/8PM010J	
	C6	CKPUYB101K50	....	
	C7	CKDYX223M25	CKDYX103M25	
	C8	CKDYX223M25	....	
	C10	CKPUYB102K50	CKDYB102K50	
	C11	CKPUYY103M16	....	
	C12	CKDYB102K50	CKDYB272K50	
	C13	....	CKPUYB101K50	
	C557,C558	CKDYB471K50	CKDYB103K50	
	C559	....	CKDYB102K50	
	L551,L552	....	LAU2R2K	
	L553	....	LAU010K	
	Antenna terminal 4−P	AKA1010	....	
	Antenna terminal 2−P	....	AKA1012	

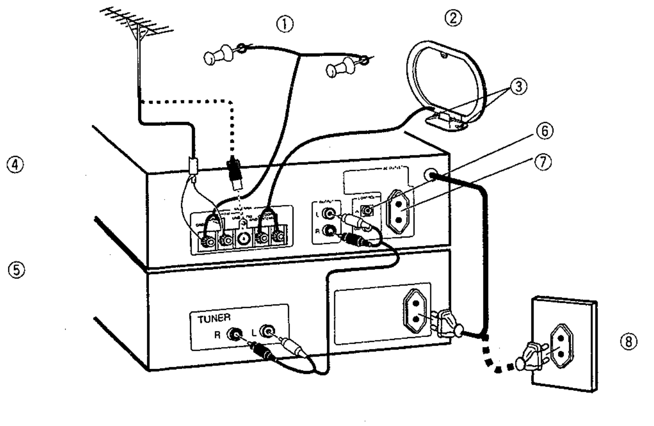
POWER ASSEMBLY
AWZ7276, AWZ7274 and AWZ7275 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		AWZ7275	AWZ7276	AWZ7274	
⚠	L601	....	....	ATF1135	

OUTLET ASSEMBLY
AWZ7278 and AWZ7279 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7279	AWZ7278	
⚠	AC socket 1 −P	AKP1034	AKP1035	

8. CONNECTONS



① **FM T-type antenna (accessory)**
- Use thumb tacks or push pins to fasten antenna wires to a wall.
- Fasten the antenna wires on a wall, not allowing the wires to droop or bunch up.

② **AM loop antenna (accessory)**

③ **Use these holes if necessary to mount antenna on a post or wall.**

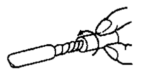
④ **F-C5RDS**

⑤ **Stereo amplifier**

⑥ **Control jack**

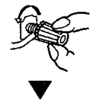
⑦ **AC outlet**

1. **Connecting the accessory FM T-type antenna and AM loop antenna.**



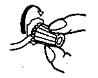
Twist the vinyl covering on the end of the wire to remove the covering.

▼



Unscrew the connector and twist the antenna wire around the shaft.

▼

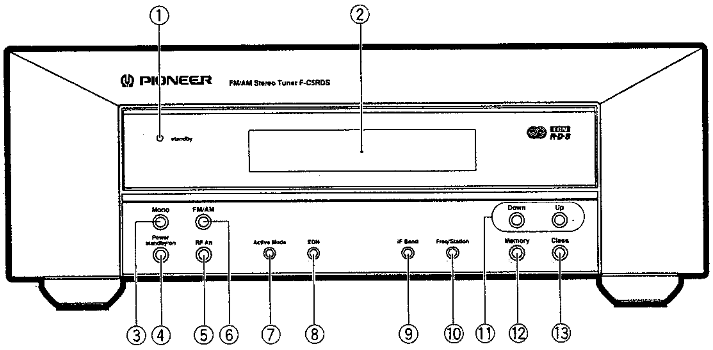


Tighten securely.

- This antenna provides a simple means of receiving FM broadcasts. For better reception, however, you may wish to use a special outdoor FM antenna.
- Do not mount the AM loop antenna on the metal case of this or other components, or near a CD player, personal computer, or television.

2. **Use the accessory audio cables to connect the color-coded connectors.**
(connect Red to the Right channel and White to the Left channel).

9. PANEL FACILITIES



① **Standby indicator**
Goes out when power is turned on; lights when power is set to standby.

② **Display section**

③ **Mono button**

④ **Power standby/on switch**
This is the switch for electric power.

on: When set to the on position, power is supplied and the unit becomes operational.

standby: When set to the standby position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. When the Standby indicator lights, the unit is in STANDBY.

⑤ **RF Att button**
Press this RF attenuator button if the excessive strength of FM signals results in distortion. The RF ATT indicator will light in the display section.

- This function does not operate during AM broadcasts.

⑥ **FM/AM button**

⑦ **Active Mode button**
Each time you press this button, the mode changes as follows:

FM:

↓
RT mode............Displays PS → RT → PTY in sequence (skipped when there is no PTY data. "RT" lights.)
↓
PS mode............Displays PS. "PS" lights.
↓
Station name input mode ...."CHARACTER" lights. Station names of up to four characters can be input for a total of 40 preset channels. This takes priority over PS data.
↓
PTY mode ....Displays PTY. "PTY" lights.
↓
PTY search mode ...."SEARCH" lights. – (down)/+ (up) buttons can be used to select the program type. Press the Active Mode button again, and it searches for programs in your specified type.
↓
Frequency display mode....Displays tuned-in frequency.
↓
CT mode...........Displays time data if available; otherwise displays frequency. "CT" lights.

NOTE:
The station name input mode and PTY search mode are skipped when the EON function is used for interrupt waiting.

AM:

↓
Station name display mode
↓
Station name input mode......"CHARACTER" lights. Station names of up to four characters can be input for a total of 40 preset channels.
↓
Frequency display mode ..Displays tuned-in frequency.

⑧ **EON button**
If receiving a station broadcasting EON information, the radio can automatically keep track of broadcast information from other network stations. If you specify traffic information (TA) or program type (PTY) beforehand, the frequency will change automatically when the specified broadcast begins.
The display's EON indicator lights when receiving a station broadcasting EON information.

⑨ **IF Band button**
Each time this button is pressed, the bandwidth of the IF circuit switches between "normal" and "narrow" for the FM band. The NARROW indicator lights up. When not lit, normal filter bandwidth is selected.
Set to NARROW in case of interference from other stations.
This button does not affect AM reception.

NOTE:
This button's status is preset for each station in station memory.

⑩ **Freq/Station button**

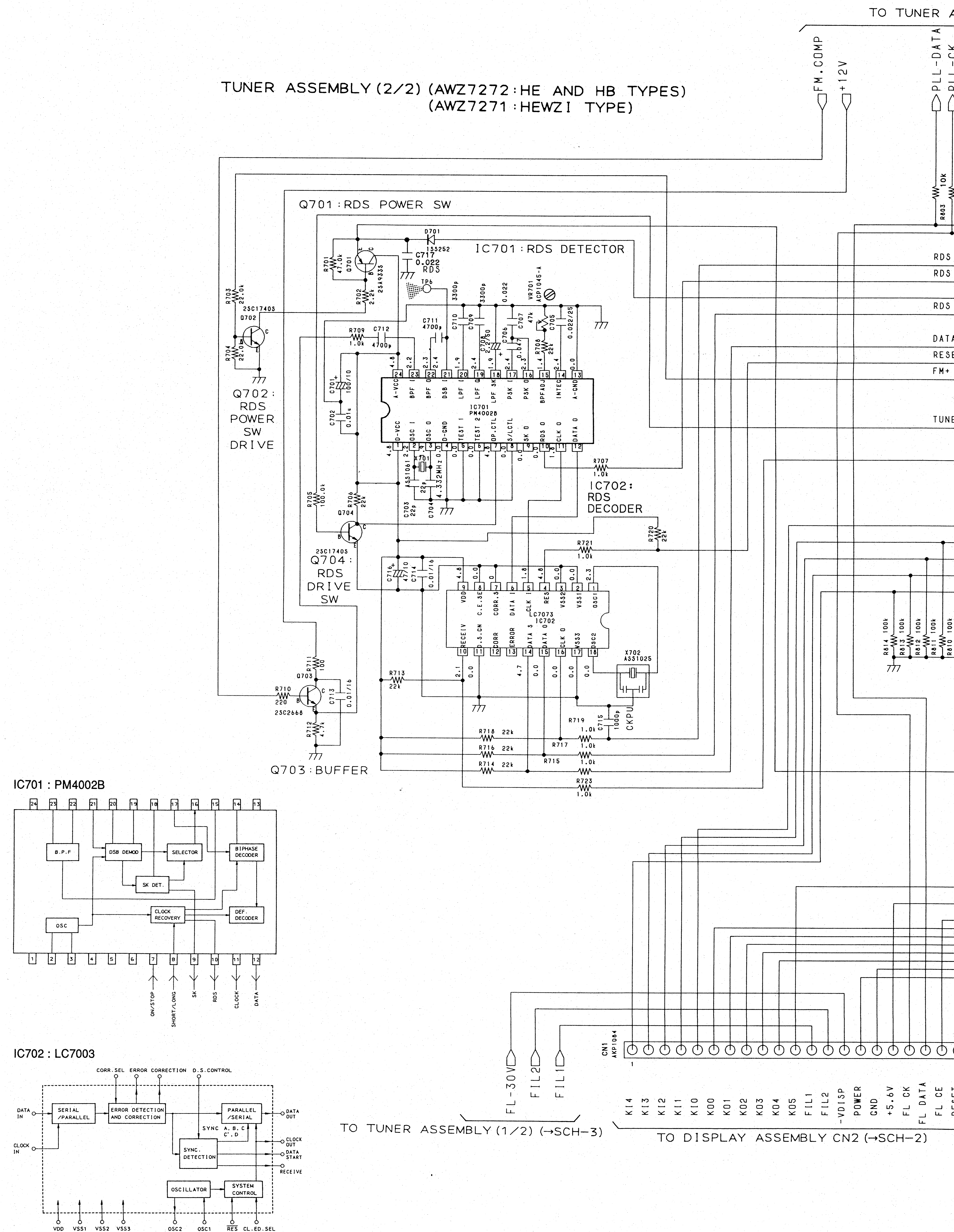
⑪ **Tuning Up+ Down– button**
Use to tune broadcast stations.

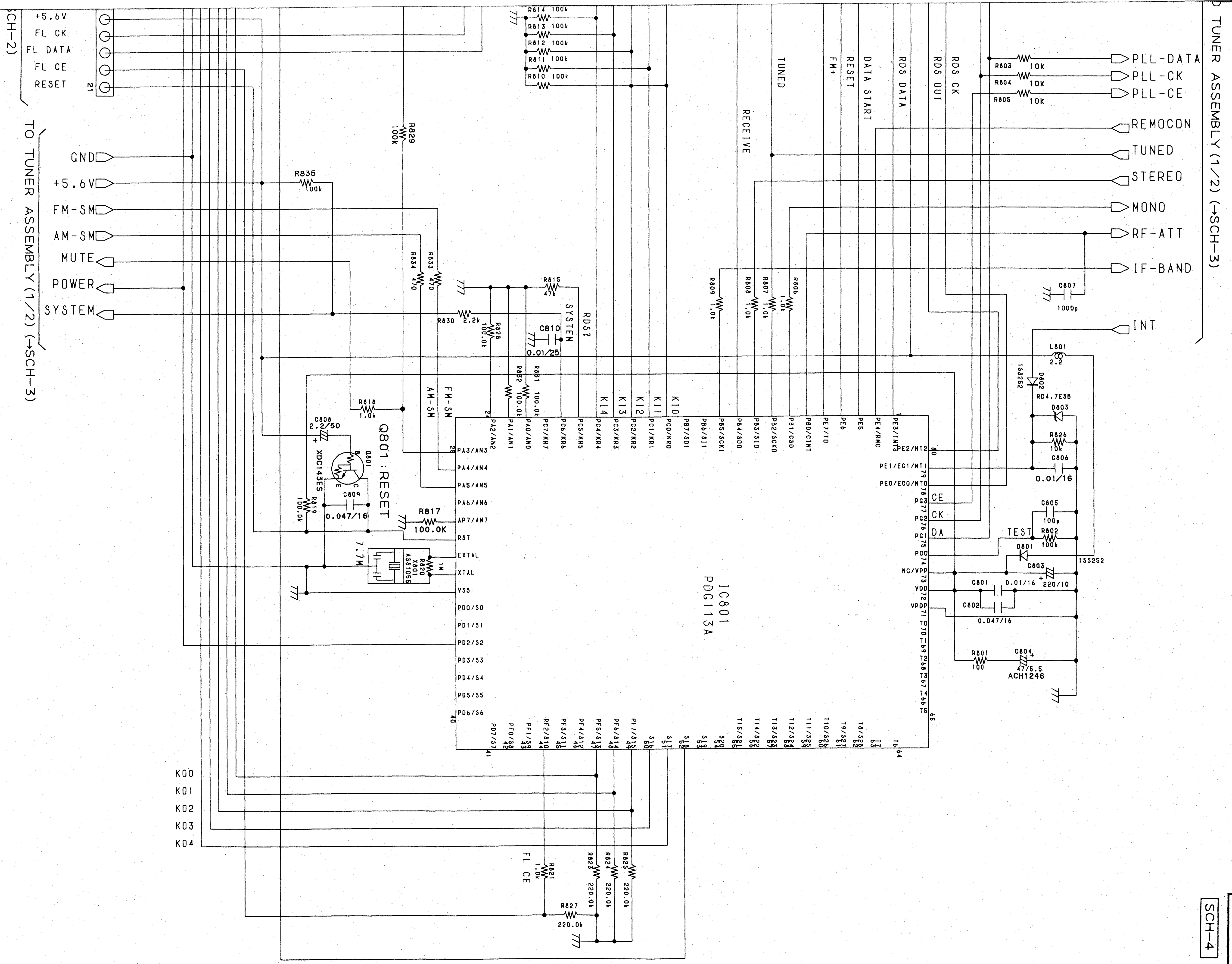
⑫ **Memory button**

⑬ **Class button**
Use to switch between preset memory classes 1 to 4. In each class, 10 stations can be memorized using the "+"/"–" buttons, enabling a total of 40 stations to be memorized.

4.4 TUNER (2/2) ASSEMBLY

TUNER ASSEMBLY (2/2) (AWZ7272 : HE AND HB TYPES)
(AWZ7271 : HEWZI TYPE)


TO TUNER A
FM.COMP
+12V
PLL-DATA
PLL-CK
R803 10k
RDS
RDS
RDS
DATA
RESE
FM+
TUNE
Q701 : RDS POWER SW
IC701 : RDS DETECTOR
D701 1SS252
C717 0.022
RDS
TP6
R701 47.0k
Q701 2SA933S
R702 2.2k
R703 22.0k
R704 22.0k
Q702 2SC1740S
Q702 : RDS POWER SW DRIVE
R709 1.0k
C712 4700p
C711 4700p
C710 3300p
C709 3300p
C708 2.2/50
C706 0.047
C707 47k
VR701 ACP1045-A
R708 22k
C705 0.022/25
C701 100/10
C702 0.01u
IC701 PM4002B
A-VCC
BPF I
BPF O
DSB I
LPF I
LPF O
LPF SK
PSK I
PSK O
BPFADJ
INTEG
A-GND
D-VCC
OSC I
OSC O
D-GND
TEST 1
TEST 2
OP.CTL
S/LCTL
SK O
RDS O
CLK O
DATA O
X701 ASS1061
4.332MHz
C703 22p
C704 22p
R705 100.0k
R706 22k
Q704 2SC1740S
Q704 : RDS DRIVE SW
R707 1.0k
IC702 : RDS DECODER
R720 22k
R721 1.0k
C716 47/10
C714 0.01/16
IC702 LC7073
VDD
C.E.SE
CORR.S
DATA I
CLK I
RES
VSS2
VSS1
OSC1
RECEIV
D.S.CN
CORR
ERROR
DATA S
DATA O
CLK O
VSS3
OSC2
X702 ASS1025
CKPU
C715 1000p
R719 1.0k
R717 1.0k
R715 1.0k
R723 1.0k
R718 22k
R716 22k
R714 22k
R713 22k
R711 100
Q703 2SC2668
R710 220
R712 4.7k
C713 0.01/16
Q703 : BUFFER
R814 100k
R813 100k
R812 100k
R811 100k
R810 100k
CN1 AKP1064
FL-30V
FIL2
FIL1
TO TUNER ASSEMBLY (1/2) (→SCH-3)
KI4
KI3
KI2
KI1
KI0
K00
K01
K02
K03
K04
K05
FIL1
FIL2
-VDISP
POWER
GND
+5.6V
FL CK
FL DATA
FL CE
TO DISPLAY ASSEMBLY CN2 (→SCH-2)
IC701 : PM4002B
B.P.F
DSB DEMOD
SELECTOR
BIPHASE DECODER
SK DET.
OSC
CLOCK RECOVERY
DEF. DECODER
ON/STOP
SHORT/LONG
SK
RDS
CLOCK
DATA
IC702 : LC7003
CORR.SEL
ERROR CORRECTION
D.S.CONTROL
DATA IN
CLOCK IN
SERIAL /PARALLEL
ERROR DETECTION AND CORRECTION
PARALLEL /SERIAL
SYNC A, B, C C', D
SYNC. DETECTION
OSCILLATOR
SYSTEM CONTROL
DATA OUT
CLOCK OUT
DATA START
RECEIVE
VDD
VSS1
VSS2
VSS3
OSC2
OSC1
RES
CL.ED.SEL



+5.6V
FL CK
FL DATA
FL CE
RESET
TO TUNER ASSEMBLY (1/2) (→SCH-3)
GND
+5.6V
FM-SM
AM-SM
MUTE
POWER
SYSTEM
R835 100k
R829 100k
R814 100k
R813 100k
R812 100k
R811 100k
R810 100k
R834 470
R833 470
R815 47k
R830 2.2k
R828 100.0k
C810 0.01/25
R852 100.0k
R851 100.0k
SYSTEM
RDS?
R818 1.0k
C808 2.2/50
Q801 XDC143ES
Q801 : RESET
R819 100.0k
C809 0.047/16
R817 100.0K
7.7M
X801 AS5105S
R820 1M
IC801 PDG113A
K00
K01
K02
K03
K04
FL CE
R821 1.0k
R823 220.0k
R824 220.0k
R825 220.0k
R827 220.0k
RECEIVE
TUNED
FM+
RESET
DATA START
RDS DATA
RDS OUT
RDS CK
R809 1.0k
R808 1.0k
R807 1.0k
R806 1.0k
R803 10k
R804 10k
R805 10k
PLL-DATA
PLL-CK
PLL-CE
REMOCON
TUNED
STEREO
MONO
RF-ATT
IF-BAND
INT
C807 1000p
TUNER ASSEMBLY (1/2) (→SCH-3)
L801 2.2
D802 1SS252
RD4.7ESB
D803
R826 10k
C806 0.01/16
CE
CK
DA
C805 100p
TEST
R802 100k
D801
1SS252
C803 220/10
C801 0.01/16
C802 0.047/16
R801 100
C804 47/5.5 ACH1246

TUNER ASSY (2/2)

SCH-4

F-C5RDS

SCH-4

5. PCB PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

$560\Omega \rightarrow 56\times10^1 \rightarrow 561$ ······ $RD1/8PM\boxed{5}\boxed{6}\boxed{1}J$
$47k\Omega \rightarrow 47\times10^3 \rightarrow 473$ ······ $RD1/4PS\boxed{4}\boxed{7}\boxed{3}J$
$0.5\Omega \rightarrow 0R5$ ······ $RN2H\boxed{0}\boxed{R}\boxed{5}K$
$1\Omega \rightarrow 010$ ······ $RS1P\boxed{0}\boxed{1}\boxed{0}K$

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62k\Omega \rightarrow 562\times10^1 \rightarrow 5621$ ······ $RN1/4PC\boxed{5}\boxed{6}\boxed{2}\boxed{1}F$

Mark	No.	Description	Parts No.	Mark
	LIST OF ASSEMBLIES			
		TUNER ASSEMBLY	AWE7007	
		├─ TUNER ASSEMBLY	AWZ7272	
		├─ POWER ASSEMBLY	AWZ7275	
		└─ OUTLET ASSEMBLY	AWZ7279	
		DISPLAY ASSEMBLY	AWP7001	
	TUNER ASSEMBLY			
	SEMICONDUCTORS			
	IC501		AN7470P	
	IC201		HA11225	
	IC301		LA1247	
	IC702		LC7073	
	IC401		LM7001J	
	IC502		NJM4558LD	
	IC602		NJM7812AS	
	IC801		PDG113A	
	IC701		PM4002B	
	IC101,IC102		TA7060AP	
	Q101,Q603		2SA1529	
	Q555,Q701		2SA933S	
	Q605		2SB560	
	Q102,Q109,Q251,Q501		2SC1740S	
	Q551−Q554,Q556,Q702,Q704		2SC1740S	
	Q851		2SC1740S	
	Q402		2SC1740SLN	
	Q106−Q108,Q703		2SC2668	
	Q608		2SD880	
	Q401,Q502		2SK246	
	Q301		XDA124ES	
	Q103,Q105,Q606		XDA143ES	
	Q104,Q607		XDC124ES	
	Q604,Q801		XDC143ES	
	D201−D203,D301,D302		1SS252	
	D501,D502,D701,D801,D802		1SS252	
	D851		1SS252	
	D102−D105		1SS85	
	D101		1SV156	
	D852		HSS104−02	
	D609		RD30ESB2	
	D803		RD4.7ESB	
	D610		RD5.1ESB1	
	D853		RD6.2ESB	
	D611		RD6.2ESB3	
	COILS AND FILTERS			
	T101		ATE−063	
	T201		ATE1008	
	T202		ATE1009	
	F103,F104		ATF−107	
	F101		ATF−119	
	F102		ATF1024	
	F301		ATF1042	
	F501,F502		ATF1143	
	F251		ATF1152	
	L101−L103,L401,L801		LAU2R2K	
	L151		LAU470K	
	CAPACITORS			
	C804		ACH1246	
	C703,C704		CCDCH220J50	
	C151,C403,C404		CCPUCH150J50	
	C315,C405−C407		CCPUSL470J50	
	C412		CEANL010M50	
	C251		CEANP4R7M50	
	C205		CEAS010M50	
	C312		CEAS100M50	
	C606,C701		CEAS101M10	
	C501		CEAS101M16	
	C611		CEAS101M35	
	C605		CEAS102M25	
	C511		CEAS1R5M50	
	C803		CEAS221M10	
	C708,C808		CEAS2R2M50	
	C104,C209,C304,C311,C402		CEAS330M16	
	C409		CEAS330M16	
	C609		CEAS331M50	
	C512		CEAS3R3M50	
	C504,C716,C852		CEAS470M10	
	C207		CEAS470M16	
	C608,C614		CEAS470M25	
	C610		CEAS470M35	
	C212,C253,C313,C316		CEAS4R7M50	
	C510		CEASR22M50	
	C254		CEEA101M16	
	C607		CEEA332M35	
	C553,C554		CEEA2R2M50	
	C560,C612,C613		CEEA470M25	
	C507,C508,C555,C556		CEEA4R7M50	
	C410		CFTXA224J50	
	C12,C308		CKDYB102K50	
	C252		CKDYB122K50	
	C709,C710		CKDYB332K50	
	C557,C558		CKDYB471K50	
	C711,C712		CKDYB472K50	
	C101,C102,C107,C305,C411		CKDYX103M25	
	C810		CKDYX103M25	
	C152,C615		CKDYX104M25	
	C111,C112,C153,C201,C202		CKDYX223M25	
	C204,C206,C306,C314,C7		CKDYX223M25	
	C705,C707,C717,C8		CKDYX223M25	
	C105,C108,C210,C302,C309,C502		CKDYX473M25	
	C706		CKDYX473M25	
	C6,C805,C851		CKPUYB101K50	
	C10,C3,C301,C307,C4		CKPUYB102K50	
	C715,C807		CKPUYB102K50	
	C503		CKPUYB121K50	
	C203		CKPUYB221K50	
	C802,C809		CKPUYF473Z16	
	C103,C106,C109,C11,C110		CKPUYY103M16	
	C208,C211,C303,C310,C401		CKPUYY103M16	
	C408,C509,C702,C713,C714		CKPUYY103M16	
	C801,C806		CKPUYY103M16	
	C551,C552		CQMA222J50	
	C505,C506		CQMXA102J100	
	C513		CQPA471J100	
	RESISTORS			
	R606		RD1/2PM471J	
	R103,R608		RD1/2PM821J	
	R307		RD1/4PM151J	
	R301		RD1/4PM331J	
	R571,R572		RDR1/4PM101J	
	R555,R556		RDR1/4PM104J	
	R567,R568		RDR1/4PM122J	
	R561,R562		RDR1/4PM222J	
	R559,R560		RDR1/4PM223J	
	R551,R552		RDR1/4PM242J	
	R565,R566		RDR1/4PM271J	
	R557,R558		RDR1/4PM472J	
	R553,R554,R569,R570		RDR1/4PM562J	
	R502,R509,R510		RDR1/4PM563J	
	VR501	(4.7k)	ACP1042	
	VR301	(10k)	ACP1043	
	VR201	(22k)	ACP1044	
	VR701	(47k)	ACP1045	
		Other Resistors	RD1/8PM□□□J	
	OTHERS			
		SCREW	ABA−298	
		ANTENNA TERMINAL 4−P	AKA1010	
	CN5	PIN JACK(2P)	AKB1146	

o. Mark

M16
M25
M35
M50
M50

M16
M35
M50
M25
M50

4J50
02K50
22K50
32K50
71K50

72K50
03M25
03M25
04M25
23M25

23M25
23M25
73M25
73M25
101K50

102K50
102K50
121K50
221K50
473Z16

103M16
103M16
103M16
103M16
2J50

102J100
J100

471J
821J
151J
331J
M101J

M104J
M122J
M222J
M223J
M242J

M271J
M472J
M562J
M563J

□□□J

98
0
6

Mark	No.	Description	Parts No.	Mark
	CN3	JACK(2P)	AKN−209	
	CN1	21P SOCKET	AKP1084	
	X702	CERAMIC RESONATOR	ASS1025	
	X401	CRYSTAL RESONATOR	ASS1042	
	X801	CERAMIC RESONATOR	ASS1055	
	X701	CRYSTAL RESONATOR	ASS1061	
	X301	CERAMIC RESONATOR	ATF1027	
		AM RF TUNING BLOCK	AXX1043	
		4 SERIAL F.E. MODULE ASSY	AXQ1004	

Note: 4 serial F.E. module assy has no servise part.

POWER ASSEMBLY

SEMICONDUCTORS

Mark	No.	Description	Parts No.	Mark
	Q601,Q602		2SC2878	
	D601−D606		S5566	

TRANSFORMERS

Mark	No.	Description	Parts No.	Mark
⚠	T601	(14.5VA)	ATT7003	

CAPACITORS

Mark	No.	Description	Parts No.	Mark
⚠	C601	(0.01/AC400V)	ACG1002	
	C603		CEAS470M50	
	C604		CKDYF473Z50	
	C602,C616		CQMA473J50	

RESISTORS

Mark	No.	Description	Parts No.	Mark
	R601,R603		RD1/4PM010J	
		Other Resistors	RD1/8PM□□□J	

OUTLET ASSEMBLY

OTHERS

Mark	No.	Description	Parts No.	Mark
⚠	CN4	AC SOCKET 1−P	AKP1034	

DISPLAY ASSEMBLY

SEMICONDUCTORS

Mark	No.	Description	Parts No.	Mark
	IC901		LC75712E	
	Q902		2SC1740S	
	Q901		XDC143ES	
	D901		1SS252	
	D908		AEL1148	

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.	Mark
	S901,S902,S905,S906,S911		ASG1034	
	S916,S917,S921,S922		ASG1034	
	S924−S926		ASG1034	

CAPACITORS

Mark	No.	Description	Parts No.	Mark
	C901		CCPUSL300J50	
	C904−C906		CCPUSL470J50	
	C902		CEJA101M10	
	C909		CEJA220M35	
	C907,C908		CKDYX223M25	
	C910−C920		CKPUYB101K50	
	C903,C921		CKPUYY103M16	

RESISTORS

Mark	No.	Description	Parts No.	Mark
		Other Resistors	RD1/8PM□□□J	

OTHERS

Mark	No.	Description	Parts No.	Mark
	V901	FL TUBE	AAV7008	
		FL SPASER	AEB7006	
	CN1	21P SOCKET	AKP1086	

6. ADJUSTMENTS

6.1 FM TUNER ADJUSTMENTS

- Connect as shown in Fig. 2.
- Set the function to FM.

Step	Adjustment name	FM SG (1 kHz ± 75 kHz dev.)			FL display, IF BAND etc.	Location	Adjustment
		Frequency (MHz)	Modulation	Level (dBμV)			
1	IF sensitivity-UP adjustment	98	MONO	Low input level	98	T101	Adjust so that the voltage between TP9 and GND becomes maximum.
2	T meter adjustment	98	MONO	60	98 MHz NARROW	T201	Adjust so that the voltage between TP1 and TP2 becomes 0±50 mV.
3	MONO distortion adjustment	98	MONO	60	98 MHz NARROW	T202	Adjust so that the distortion becomes minimum.
4	Repeat step 2 and 3 until optimum adjustment is obtained.						
5	VCO adjustment	108	OFF	60	108MHz NARROW	VR501	Adjust so that the output at TP3 becomes 76 kHz ±0.5 kHz.
6	STEREO distortion adjustment (NARROW)	89(*2)	L−ONLY	60	89 MHz NARROW	T101	Turn the core of T101 within a range of ±90° and adjust so that the distortion becomes minimum.
7	Muting level adjustment	98	MONO	15 ±5dB	98 MHz NORMAL	VR201	Adjust so that the muting is released at the input level shown on the left.
8	SK level adjustment	88	EXTERNAL *1 (RDS SG)	60	88 MHz NORMAL (ATT ON)	VR701	Adjust so that the voltage between TP6 and GND becomes maximum.

*1 : RDS SG (AUDIO, PILOT, RDS, BK and DK : OFF, SK : ON)

*2 : Stereo modulation : Main 1 kHz L+R, ±68.25 kHz.
Pilot 19 kHz, ±6.75 kHz.

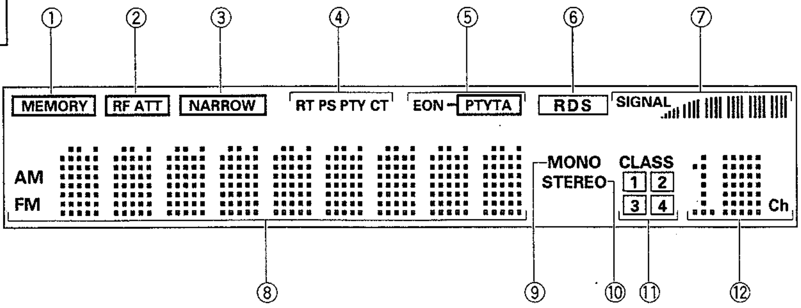
6.2 AM TUNER ADJUSTMENT

- Connect as shown in Fig. 2.
- Set the function to AM.

Step	Adjustment name	AM SG(400kHz, 30% modulation)		FL Display	Adjustment	
		Frequency(kHz)	Level(dBμV/m)		Location	Specifications
1	S meter adjustment	1008	100	1008 kHz	VR301	Adjust so that the voltage between TP4 and GND becomes 4.5V ±0.1 V.

420

Display Section
Section d'affichage
Display
Quadrante delle indicazioni



① **MEMORY indicator**

② **RF ATT indicator**
Stays lit while RF Att button is on.

③ **NARROW indicator**
Stays lit while IF Band button is set to NARROW.
When not lit, stays NORMAL.

④ **RT, PS, PTY, CT indicator**
One of these lights to indicate the selected display mode (selected by the Active Mode button).
Time is displayed when the CT data is received. It switches to frequency mode display if not lit.

⑤ **EON – PTY TA indicator**
When a station broadcasting EON information is received, EON — ☐ lights. After specifying TA or PTY, interrupt waiting begins and the TA or PTY indicator lights. When specified TA or PTY is received, TA or PTY flashes.

⑥ **RDS indicator**
Lights when an RDS broadcast is received.

⑦ **SIGNAL indicator**

⑧ **Frequency, character, clock time indicator**
CT (Clock Time) data, band RDS data and frequency data are displayed.

⑨ **MONO indicator**
Stays lit while Mono button is set to MONO.

⑩ **STEREO indicator**
Lights up when a stereo broadcast is received (the indicator does not light when the Mono button is set to MONO).

⑪ **CLASS 1, 2, 3, 4 indicator**
Shows the class selected by the Class button.
The current CLASS is displayed.

⑫ **Station indicator**
When Freq/Station button is pressed, it will show the corresponding channel number.

10. SPECIFICATIONS

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity (IHF)	12.7 dBf (1.2 µV/75 Ω)
50 dB Quieting Sensitivity	Mono; 18 dBf (2.2 µV/75 Ω) Stereo; 38.3 dBf (22.6 µV/75 Ω)
Sensitivity (DIN)	Mono; 1.0 µV/75 Ω Stereo; 35 µV/75 Ω
Signal-to-Noise Ratio	Mono; 78 dB (at 85 dBf) Stereo; 74 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN)	Mono; 62 dB Stereo; 60 dB
Distortion	0.3 % (1 kHz)
Alternate Channel Selectivity	65 dB (300 kHz)
Stereo Separation	40 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz ±1 dB
Image Response Ratio	80 dB
IF Response Ratio	90 dB
Antenna Input	75 Ω unbalanced
Output	650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range	531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna)	350 µV/m
Selectivity	30 dB
Signal-to Noise Ratio	50 dB
Antenna	Loop Antenna
Output	150 mV (30 % MOD.)

Miscellaneous

Power Requirements	AC220–230 Volts ~, 50/60 Hz
Power Consumption	16 W
Dimensions	260 (W) x 95.5 (H) x 336 (D) mm
Weight (without package)	2.4 kg

Furnished Parts

FM T-type Antenna	1
AM Loop Antenna	1
Audio connection cable with Pin Plugs	1
Operating Instructions	1
Control cable	1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.